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Flipped Learning: Getting student buy-in and engagement for pre-learning teaching methods



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This session is described and discussed in a paper currently “in review” with *Education + Training*

- Balan, P, Clark, M & Restall, G, 'Ensuring student buy-in for pre-learning in Flipped or Team-Based Learning classes'
- Implementation slides for this session are available, and are being used by educators in Australia, US, Canada, Russia
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Ensuring student buy-in for pre-learning in Flipped or Team-Based Learning classes

Balan, P, Clarke, M & Restall, G, 'Ensuring student buy-in for pre-learning in Flipped or Team-Based Learning classes', Submitted to *Education + Training*, 22 July 2014

Abstract

Purpose

Teaching methods including the “flipped classroom” and Team-Based Learning (TBL) require students to pre-learn course materials before a teaching session, where exercises rely on students using self-gained knowledge. This is the reverse to “traditional” teaching when course materials are presented during a lecture, and students are assessed on that material during another session at a later stage. This paper describes an introductory orientation class session that prepares and engages students to successfully participate in courses requiring pre-learning

Design/methodology/approach

An exploratory design was used where a number of learning activities drawn from the education literature were implemented in undergraduate classes.

Findings

Student evaluations of the orientation activities showed that they understood the purpose of each activity, and that it helped them to prepare for a pre-learning teaching method.

Practical implications

A sequence of seven activities helps students to understand their obligations in a course requiring pre-learning. This also prepares them for active engagement in the teaching sessions that follow. In addition, this orientation gives the educator valuable information for understanding the motivations, expectations and perceptions of student learners. This allows teaching approaches to be tailored to the needs of that class.

Originality/value

The combination of learning activities, drawn from the education literature, is novel and gives both students and educators insights into learning processes required for effective pre-learning for student-centred teaching methods. This is an approach that can be applied in different fields of education.

Keywords

Flipped classroom, Team-Based Learning, pre-learning, learning contracts, entrepreneurship, teaching methods

Paper Type

Case Study

What are “pre-learning teaching methods”?

- Students learn materials **before** they attend a class session, and the session is used to discuss those materials.
- This is an “old” idea that has been around for a long time; eg in many MBA programs:
 - but is generally not used systematically in undergraduate (or in most post-graduate) courses.
- This approach has been formalised in the “**flipped classroom**” and **Team-Based Learning** methods:
 - Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the Classroom: A Gateway to Creating an Inclusive Learning Environment. *The Journal of Economic Education*, 31(1), 30-43.
 - Michaelsen, L.K. (1992), "Team Learning: A Comprehensive Approach for Harnessing the Power of Small Groups in Higher Education", *To Improve the Academy*, Vol. 11, pp. 107-122.



Pre-learning methods – key elements

1. Students learn before the class; eg texts, videos, YouTube, Coursera, readings/papers
2. You provide an incentive for students to prepare; eg online quizzes, worksheets, short assignments, grading for completion
3. You provide a mechanism to assess student understanding; eg pre-class online quizzes, pre-class worksheets, pre-class writing assignments, in-class activities (clicker questions or debates)
4. You provide in-class activities that focus on higher level cognitive activities; eg debates, data analysis, synthesis activities. Class time is used to deepen understanding and increase skills in using new knowledge

Source: Vanderbilt University, Center for Teaching, Flipped Learning

Comparing “Flipped Classroom” and Team-Based Learning

“Flipped classroom”	Team-Based Learning (TBL)
Students learn before the class	Yes
Provide an incentive for students to prepare	Tests for assessment
Provide a mechanism to assess student understanding	Individual and team tests
Provide in-class activities (generally group-based) that focus on higher level cognitive activities	Yes, but with clear and effective framework

TBL was developed in the 1970s and combines pre-learning with the power of collaborative team learning. TBL offers detailed practical implementation guidelines.

So, how can we prepare students for the different learning experience?

- Students start a course with their own expectations and experiences, moderated by information from other students
- The literature identifies student resistance to this approach to learning – as well as challenges that educators face in implementing pre-learning teaching methods

Our challenge as educators:

- To develop the right learning culture in our particular classroom
- To work out how to work most effectively with the students in front of us
- To help those particular students to learn in the way that we have designed
- To help our group of students to be successful.

And for us, as educators, to enjoy the process/ experience!

An orientation session with 7-steps to overcome student resistance and get student buy-in and engagement

1. Students are formed into groups
2. Groups select a name, and members introduce themselves
3. Identify student learning motivations and expectations
4. Introduce teams and students to the whole class
5. Explore aspects of learning
6. Identify the requirements for success on the course
7. Review the learning purpose of each of the above steps

This session with its 7 steps contributes significantly to creating and embedding an appropriate learning culture.

Step 1. Students are formed into groups...

Purpose:

- Flipped learning relies extensively on group-work during class sessions (according to the literature)
- Forming groups and teams allows students to benefit from the power of collaborative learning (as designed into TBL) – this leads to improved learning outcomes
- This allows more efficient and effective classroom management

Group allocation can be random; **eg** students are told to:

- “Form a line, one person behind the other, in the lecture theatre
- Organise yourselves in alphabetical order of the name of the major stream you are studying; eg “commerce” “communications”, “engineering”, “marketing”, etc
- Within your major study stream group, organise yourselves in alphabetical order of your first name or preferred name
- Count off in (eg in 8s) to form groups of 6 (for a class of 48), and sit in groups in the designated locations”

Now, for this workshop, let's get into groups...

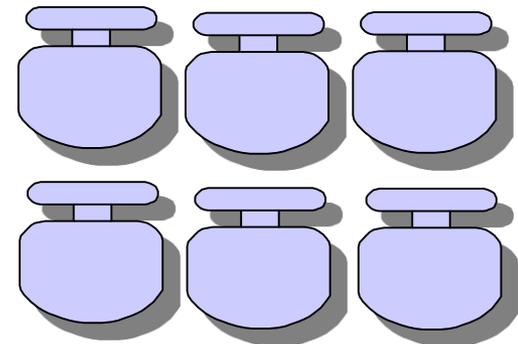
- Form a line, one person behind the other
- Organise yourselves in alphabetical order of the name of the city where you teach;
- Within your city group, organise yourselves in alphabetical order of your first name or preferred name

For this workshop: Team allocation

Now, we will give each person a number – so that we will have teams of 6

When this has been done sit in your new teams by your number

- Sit in the general locations indicated on the board
- Organise yourselves so that you are sitting in so that you can communicate easily, eg in two rows



Step 2. Groups select a name, and members introduce themselves (to each other)

Purpose:

- This is the first step in forming a learning team (the group completes its first task)



For this workshop: Team name

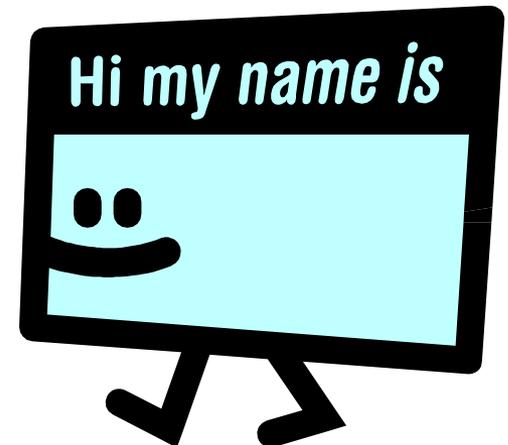
Now, in your teams, work out a name for your team that you will feel comfortable with - just for this workshop ...



For this workshop: Team Introductions

Now: introduce yourselves to your team members

- Preferred name, city where you teach
- One person in the team is to record these details



Step 3. Identify student learning motivations and expectations

Purpose:

- Students learn about the range of motivations and expectations in the class (ie others have different views)
- The educator gathers information to improve teaching and to better manage student expectations

Students are asked to:

- Write two reasons why they enrolled and two things they expect to get from the course on a blank sheet of paper (this is a “minute paper” method). *This is done as shown in the following slides*
- Responses are randomised using a “snowballing” approach
- Teams summarise their data and report to the class; the educator captures the initial results
- Responses are collected by the educator, analysed and reported back to the class at the end of the course. *Typical results are shown in the slides that follow*

For this workshop, on the blank sheet of paper ...

Please write (clearly):

A: **M** if you are male, **F** if you are female

B: The city where you teach

C: Two reasons why you enrolled for this workshop
(motivations)

D: Two things you want to get out of this workshop
(expectations)

E: (if applicable) experience in pre-learning methods



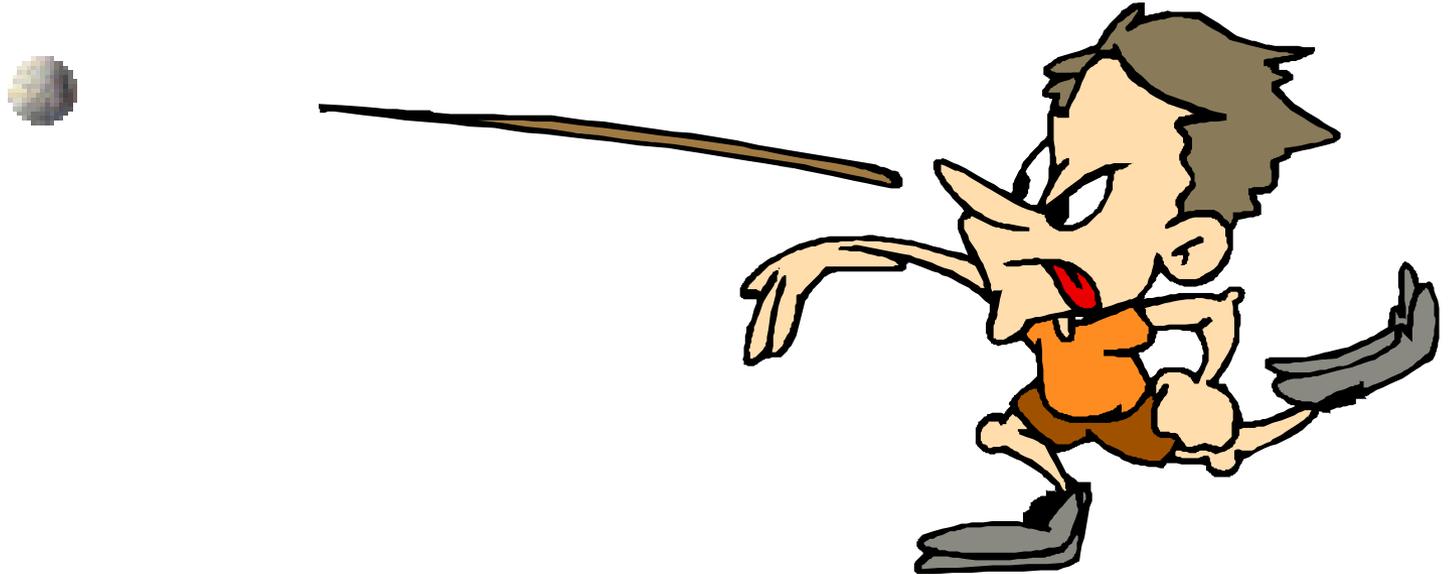
Do not write your name on the sheet of paper!

Data collected through this survey will be used to inform improvements at UniSA and could also be used in external publications and presentations. Individual responses will remain confidential and no individuals will be identified. (UniSA Policy A-34.1)

Why are you doing this course ...?

Now:

- crumple your sheet of paper into a ball, and
- throw it **to the front** of the room



Why are you doing this course ...?

Now:

- each person is to collect some-one else's ball of paper and open it up

Sit in your teams



For this workshop, why are you here...?

In your teams, **summarise the results** of your “random survey” of comments on the papers your team members have collected, regarding:

B: The cities where they teach

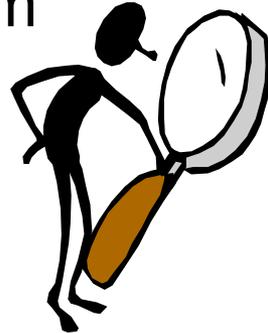
C: Why people enrolled for this workshop

D: What they want to get out of the workshop

E: What previous experience they have with pre-learning methods

Pick one team member to report your “survey” summary to the class.

Summarise the comments on a separate sheet of paper. Do not write on the individual sheets of paper you collected!



Step 4. Introduce teams and students to the class

The purpose is to create a climate where:

- Communication is personalised beyond the level of the team
- Students are encouraged to communicate actively across the class
- Each student learns that they are expected to speak on behalf of their team

Each team nominates a person to:

- Introduce each team member by their preferred name, and summarise the degrees studied in the team
- Report the team's summary of the information collected by their team in the Step 3 exercise.

For this workshop: introductions

One person from each team is to stand up and:

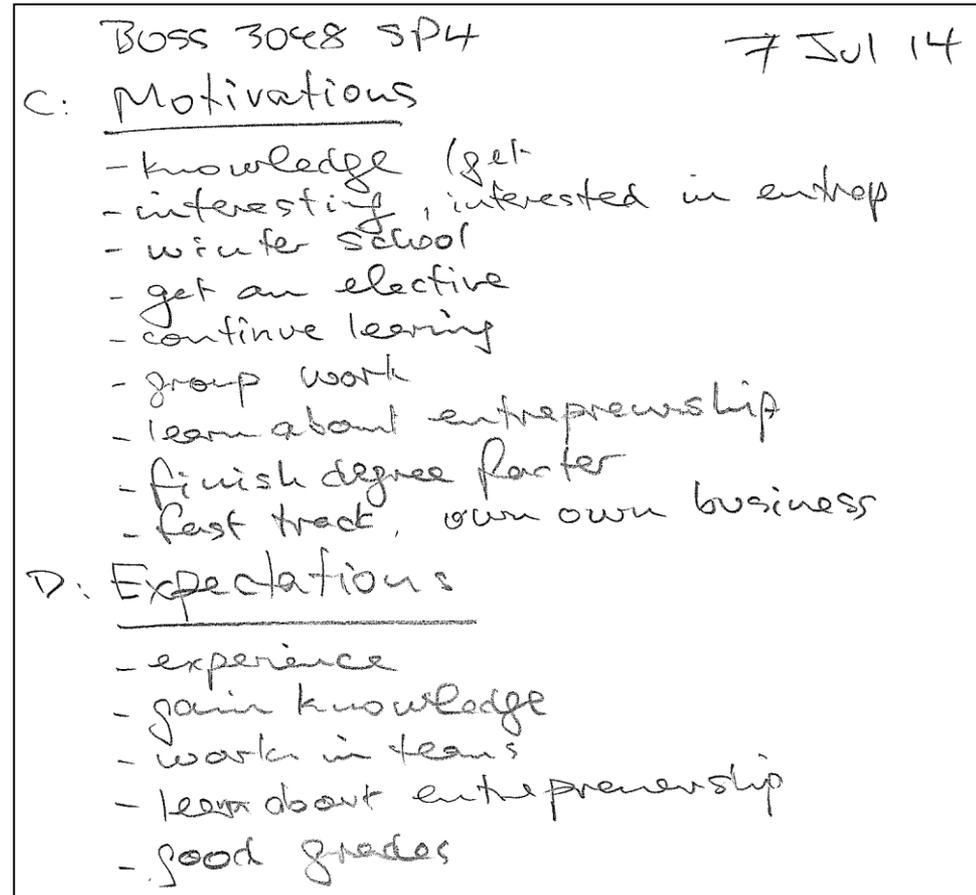
- Give the name of your team
- Introduce your team members by their preferred names
- List the cities where they work
- Report the summary results of your “survey”:
 - **C:** The main reasons why people enrolled for this particular workshop, and
 - **D:** The main things that people would like to get out of this workshop
 - **E:** What experience they have with pre-learning methods



Example: How this information is first captured

Learning motivations and expectations

- Notes are taken while teams report their findings
- These are made available to students (as a scanned document)
- They are displayed and referred to during class sessions



Now we will collect all the sheets of paper

- **We will analyse the information and give you the results at the final course review session**



Example: Let's review your learning motivations: Why did I enrol in this course? BUSS 3043 SP6, 2013

There were 82 different statements from 40 students in response to this question...

These were analysed using “Concept Mapping” (as a method for analysing qualitative data)

Ref: Balan, P, Balan-Vnuk, E, Metcalfe, M & Lindsay, NJ 2015, 'Concept mapping as a more methodical and transparent data analysis process', in Elsbach, KD & Kramer, RM (eds), *Handbook of Innovative Qualitative Research*, Routledge, New York (In Press).

- This produced a solution with 11 “themes” of statements





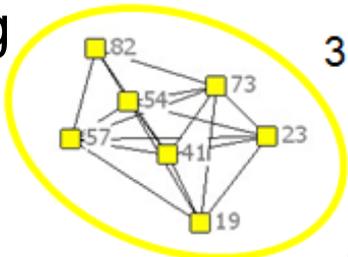
UniSA

RESULTS ARE DISCUSSED WITH THE CLASS

Example: Student learning motivations

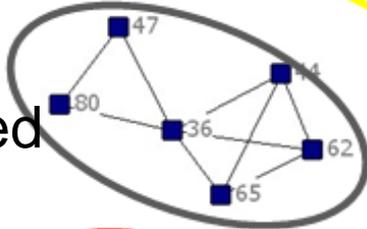
- 18
- 16
- 5
- 49
- 51
- 79

Interesting

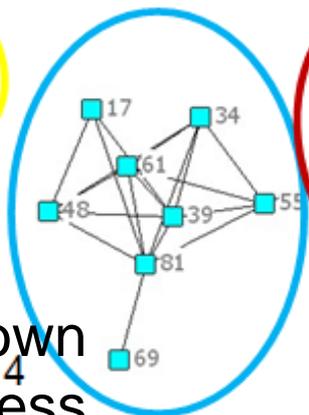


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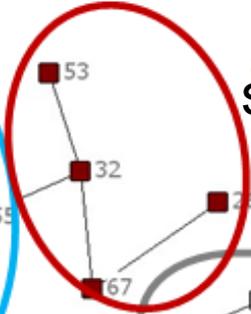
Learn something useful



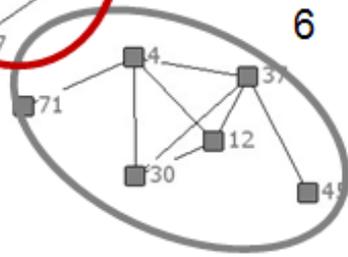
2 Start own business



4



5

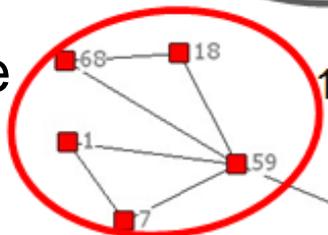


6

Different

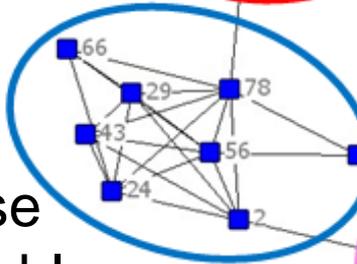
Recommended

Intensive



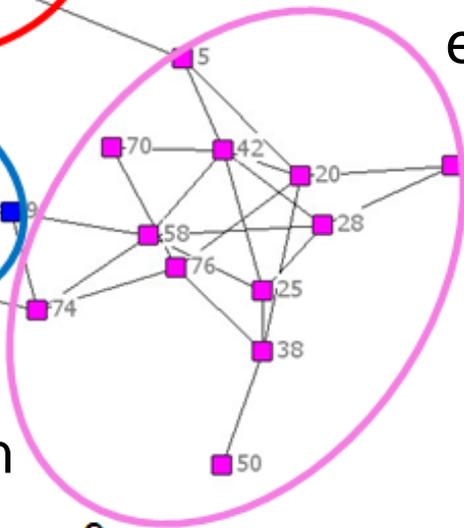
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Graduate end of year



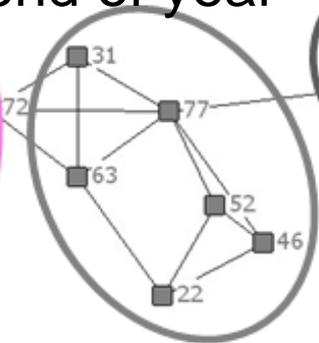
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Only course available

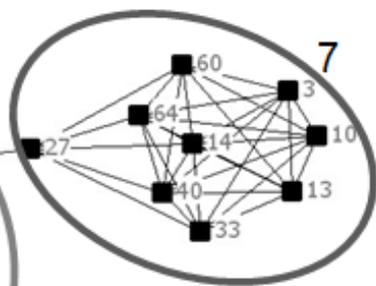


9

Need an elective

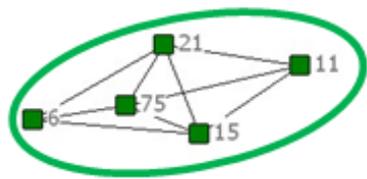


8



7

Finish degree quicker



1

Interest in entrepreneurship

Example: Let's review your learning expectations: What did you want to get out of this course? BUSS 3043 SP6, 2013

There were 59 different statements from 40 students in response to this question...

These were analysed using the Concept Mapping method

- This produced a solution with an optimum number of 9 “themes” of statements





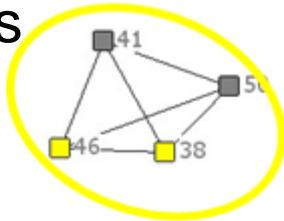
UniSA

Example: Student learning expectations

- 30
- 36
- 52

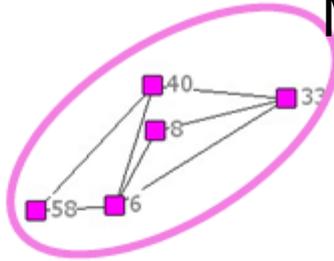
Improve teamwork skills

1



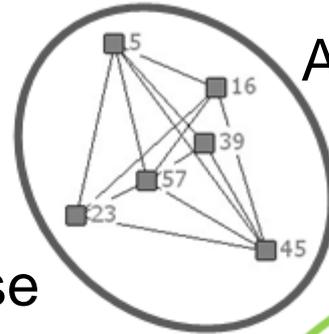
Make friends

2



A good grade

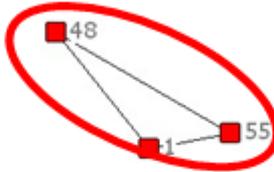
4



Knowledge of entrepreneurship

Pass the course

3

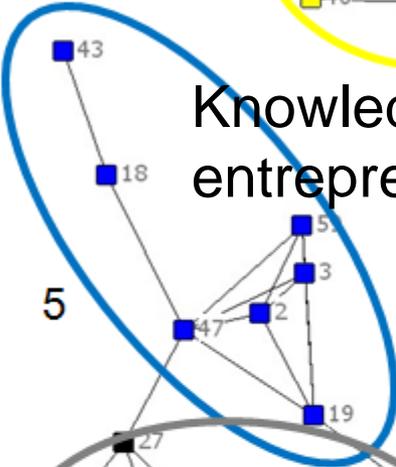


Understand entrepreneurship

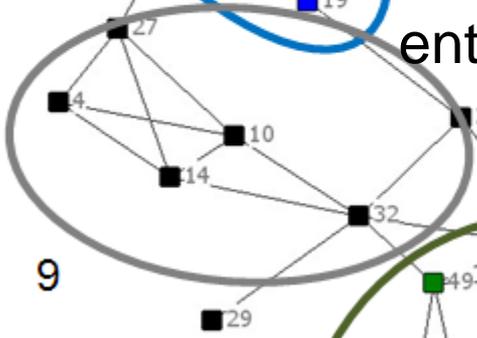
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Knowledge for future career

5

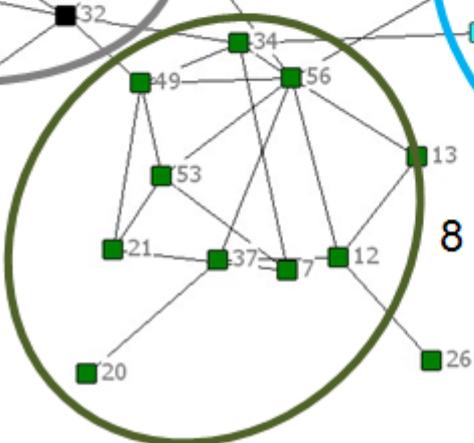


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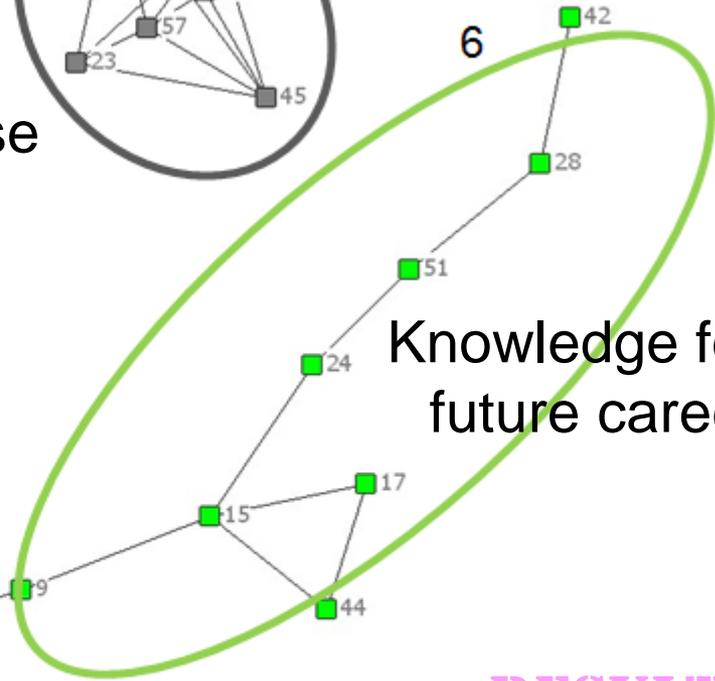


Learn how to start a business

8



Improve business knowledge



RESULTS ARE DISCUSSED WITH THE CLASS

Step 5. Explore aspects of learning

The purpose is to get students to:

- Think about learning, and find out what others think
- Understand that they can learn content/course materials by themselves
- Understand how the class sessions will be used

Students are asked to reflect on 1. learning content, 2. learning applications and 3. learning how to learn (meta-cognition). In particular, each student identifies:

- Which of these three is most important to them. *The way this is done is shown in the following slides*
- Which of these they can do most effectively by themselves outside the classroom
- Which of these they can do most effectively in the classroom

Results are shown in a following slides, and are presented to the class in the next session.

What about learning ?

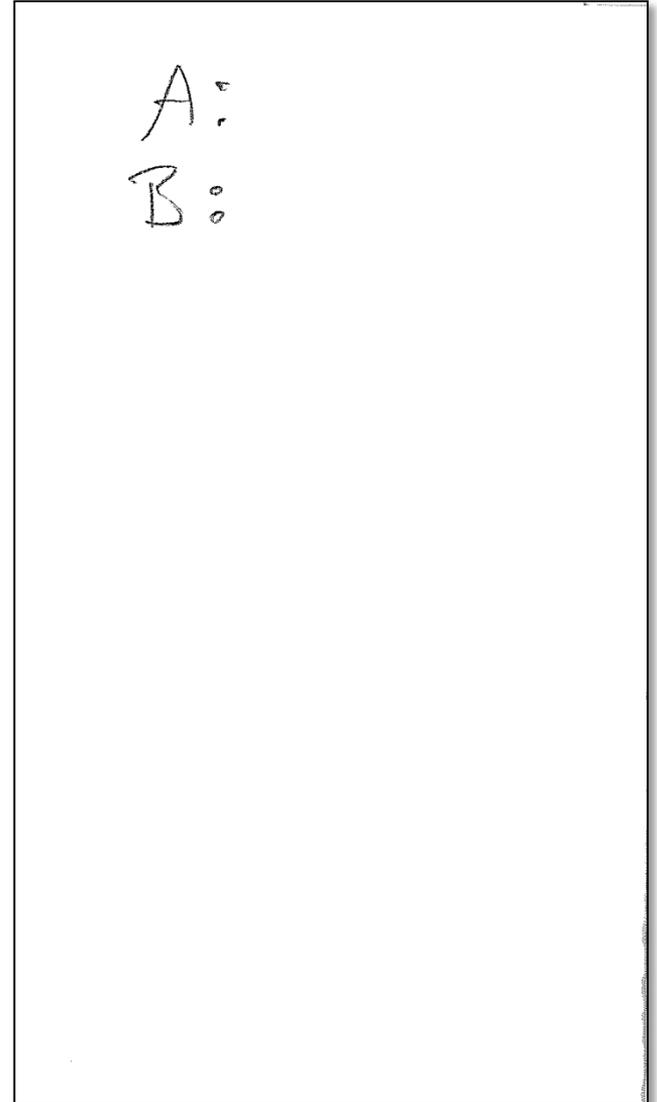
Fold a sheet of blank paper into 3...

On the FIRST fold of your sheet of paper, write:

A: M if you are male, **F** if you are female

B: L if you are a local student, **IS** if you are enrolled as an international student

Data collected through this survey will be used to inform improvements at UniSA and could also be used in external publications and presentations. Individual responses will remain confidential and no individuals will be identified. (UniSA Policy A-34.1)

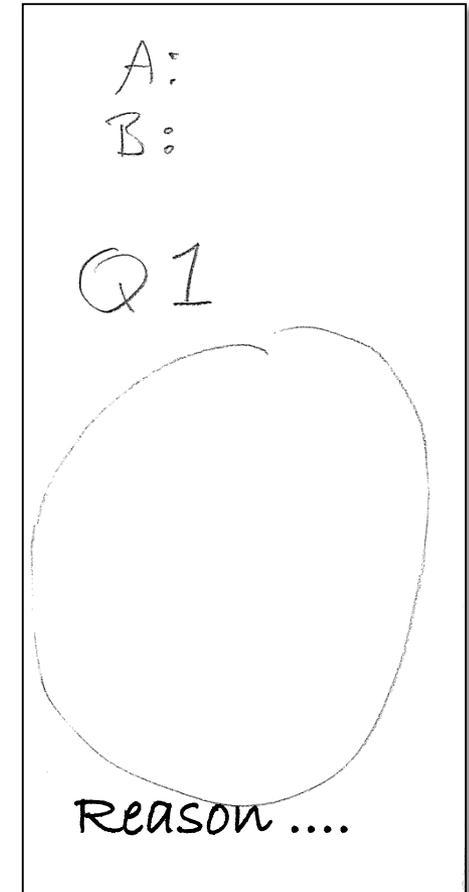


What about learning ?

WAIT: Show your response at the SAME TIME....

“The MOST IMPORTANT thing for ME is”:

1: Getting information (learning facts, principles, concepts)	<i>On your FIRST fold</i> , write Q1, a BIG number 1 and one reason
2: Learning how to use information and apply knowledge in new situations	Write Q1 and a BIG number 2 and one reason
3: Developing life-long learning skills	Write Q1 and a BIG number 3 and one reason

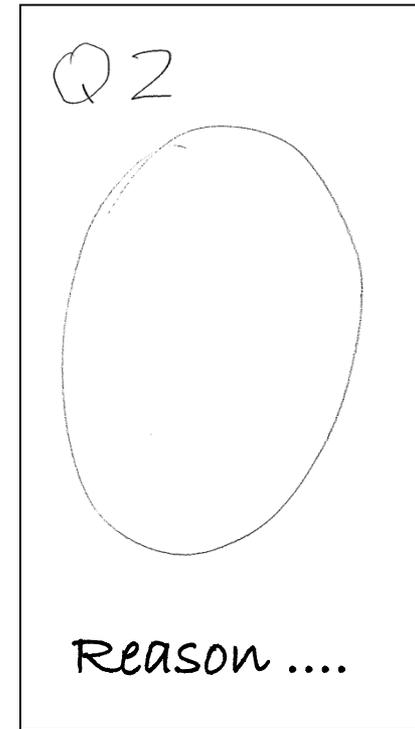


WAIT for the count... then hold up your paper! 29

Each is important... how do we best achieve each of these goals?

QUESTION 2 Which do you think that you can do effectively on your own (or in teams) **OUTSIDE** the classroom?

1: Getting information (learning facts, principles, concepts)	<i>On your SECOND fold</i> , write Q2, a BIG number 1 and one reason
2: Learning how to use information and apply knowledge in new situations	Write Q2 and a BIG number 2 and one reason
3: Developing life-long learning skills	Write Q2 and a BIG number 3 and one reason

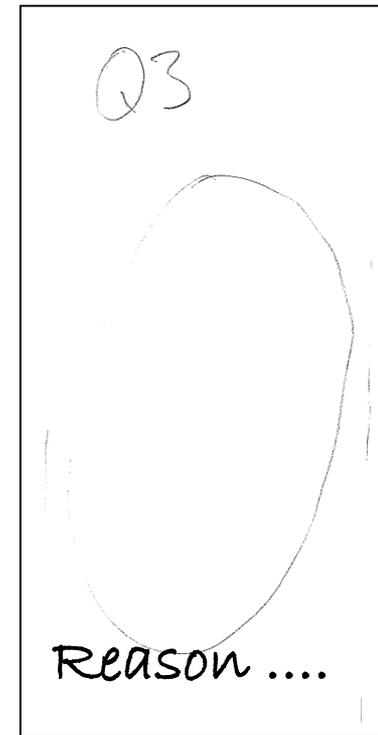


WAIT for the count... then hold up your paper!

Learning facts, applications and learning how to learn...

QUESTION 3 Which do you think is best achieved **IN CLASS**, working with your classmates and with the lecturer?

1: Getting information (learning facts, principles, concepts)	<i>On your THIRD fold</i> , write Q3 and a BIG number 1 and one reason
2: Learning how to use information and apply knowledge in new situations	Write Q3 and a BIG number 2 and one reason
3: Developing life-long learning skills	Write Q3 and a BIG number 3 and one reason



WAIT for the count... then hold up your paper!

Now we will collect all the sheets of paper

- **We will give you an overview of the results at the next session**



Example: BUSS 2054, Learning content, applications, how to learn exercise, n=35:

	Getting information	Learning how to use knowledge	Developing learning skills
Most important for me	5	24	6
Can do outside class	18	13	4
Best done in class	11	17	7

RESULTS ARE DISCUSSED WITH THE CLASS

**Example: Learning content, applications,
how to learn exercise: Compare with
educators n=36**

	Getting information	Learning how to use knowledge	Developing learning skills
Most important for me	5 (2)	24 (19)	6 (15)
Can do outside class	18 (32)	13 (3)	4 (1)
Best done in class	11 (2)	17 (33)	7 (1)

Step 6. Identify the requirements for success in the course

The purpose is to get students to:

- Identify the specific things that they, their team, and the lecturer need to do in order to be successful
- Learn of the different expectations/views across the class
- Understand the learning contract (in their own words)

Students are asked to:

- Write two things that they, their team members, and the lecturer each need to do. This is done using a blank sheet of paper (“minute paper”). *The way that this is done is shown in the following slides.*
- Responses are randomised using a “snowballing” approach
- Teams summarise their data and report to the class
- Responses are collected by the educator, analysed and reported back to the class during the course. *Results are shown in the following slides.*

Now, what do you need to DO to be successful?

You have learned:

- Why people have enrolled in this course
- What people expect to get out of the course
- What people's learning priorities are.

You also know that this course has 3 assessments:

- An individual assignment (results of five multiple choice tests that combine your results with those of your team)
- A team report (a feasibility plan for the business idea we will discuss later)
- A two-hour written exam (in the exam week for this study period)

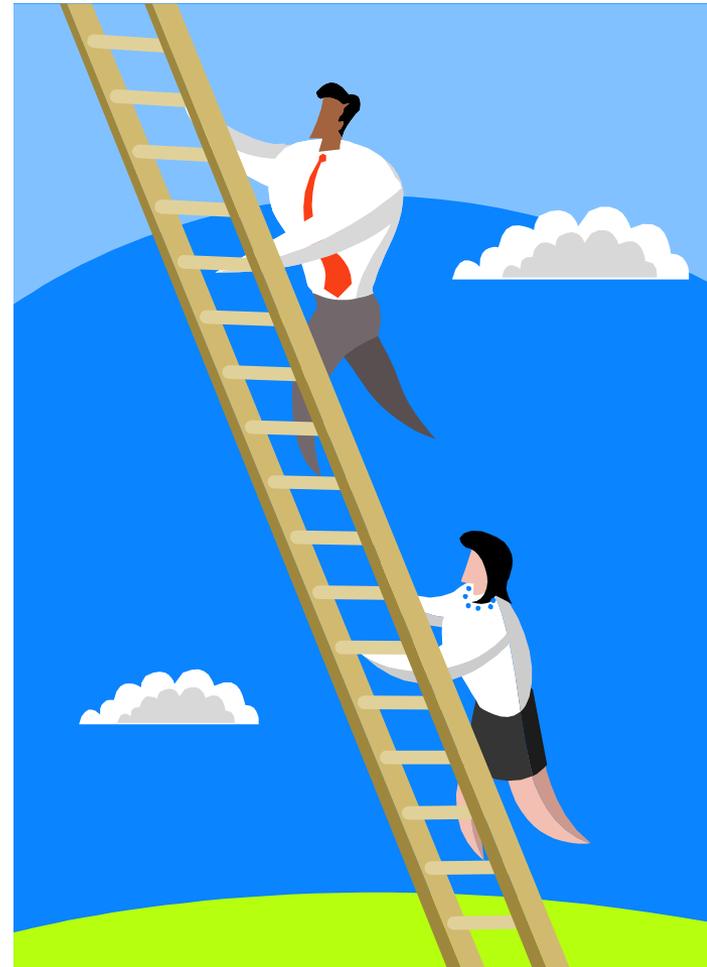
So, how can you be successful ...?



You have to DO things to be successful

Working out how we need to learn (in the last exercise) is important:

- **But success does not just come from learning...**
- **We have to work out what we need to DO to be successful...**



What do we need to DO to be successful?

On the new blank sheet of paper write (clearly):

A: M if you are male, **F** if you are female

B: L if you are a local student, **IS** if you are enrolled as an international student

C: Two or three things you think **you personally need to do** for you to be successful in this course

D: Two or three things you think **your team members need to do** for your team to work effectively and successfully

E: Two or three things you think **the lecturer needs to do** to help you to be successful

Do not write your name on the sheet of paper!

Data collected through this survey will be used to inform improvements at UniSA and could also be used in external publications and presentations. Individual responses will remain confidential and no individuals will be identified. (UniSA Policy A-34.1)

Example: How this information is first captured

Things to do to be successful:

- Notes are taken while teams report their findings
- These are made available to students (as a scanned document)
- They are displayed and referred to during class sessions

What do you need to DO to be successful in this course?
10 Feb 14

<p><u>C Person</u></p> <ul style="list-style-type: none"> understand concepts be organised not be lazy speak up do readings ✓ 	<ul style="list-style-type: none"> attend class ✓ Study hard Concentrate Manage time ✓ Contribute be organised interact with others Set goals outside revision
<p><u>D Team</u></p> <ul style="list-style-type: none"> equal contribution cooperations ✓ be optimistic plan time meet. deadlines 	<ul style="list-style-type: none"> communication ✓ participation interact in group don't be lazy give ideas work together teamwork
<p><u>L Lecturer</u></p> <ul style="list-style-type: none"> be organised surveys? share knowledge be clear real world exemplar relevant content provide good feedback prepare good lectures 	<ul style="list-style-type: none"> encourage help when needed ✓ communication approachable engage with class stimulate discussion mark quickly keep everyone motivated clear explanations of what you need to do

Now we will collect all the sheets of paper, including your team's "additional comments". Do not write your team name or number on that other sheet of paper.

- We will provide a summary of the key points (at a later stage)



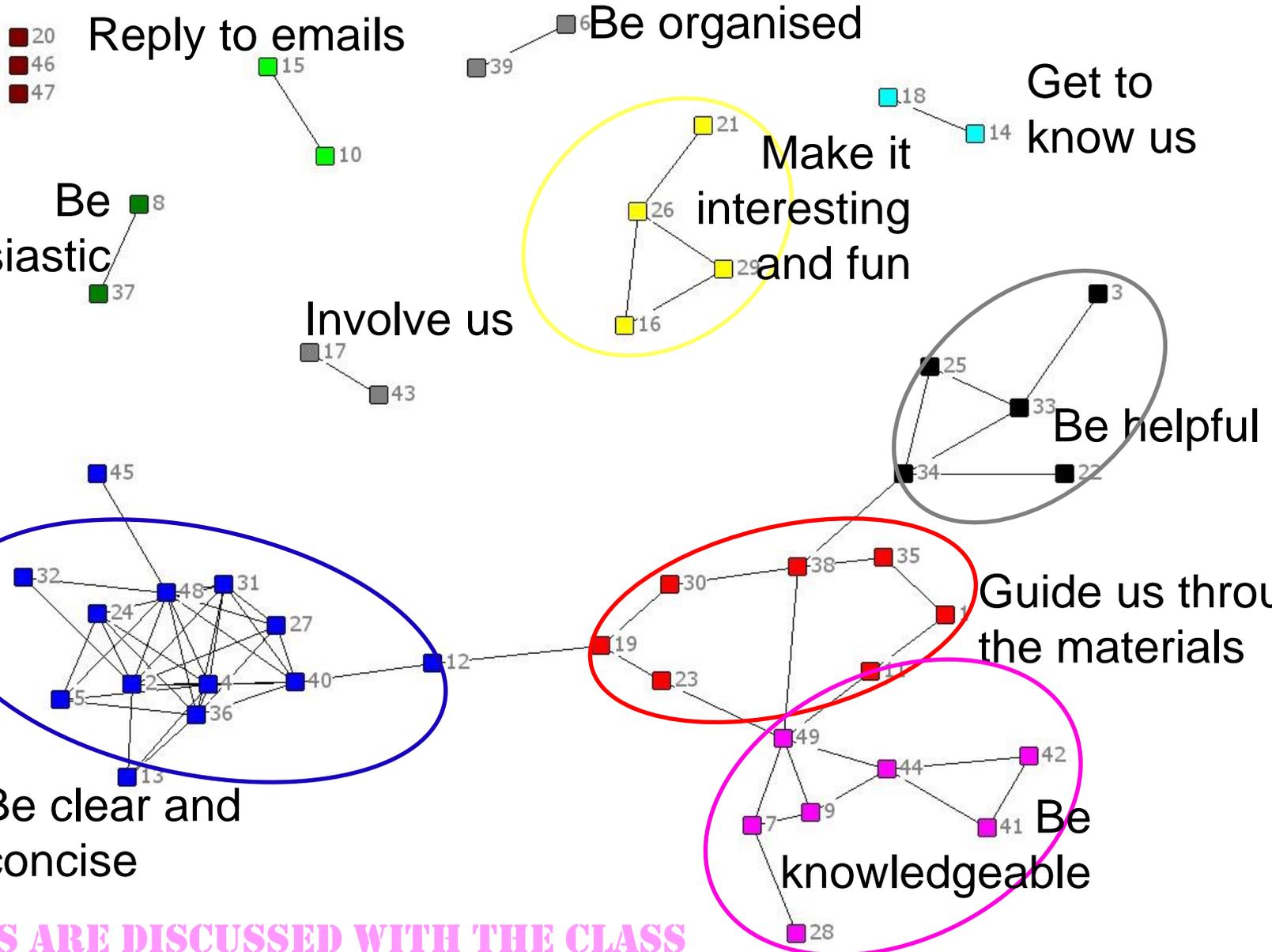
Example: Remember, at the first session you were asked to give your thoughts on what you, your team and the lecturer need to do for you to be successful.... BUSS 2054, SP5 2014.

Here are the **results for your lecturer.**

- 32 students contributed 49 comments
- Comments were analysed using concept mapping
- The analysis produced 10 clusters of comments, with 5 main clusters or themes



Example: What the lecturer needs to do – for me to be successful

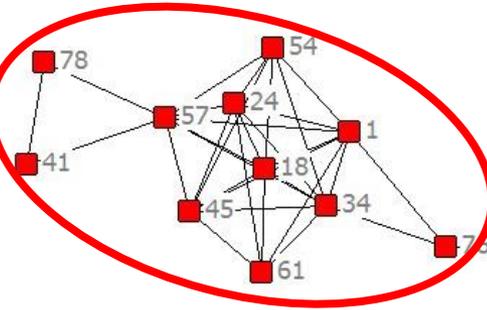


RESULTS ARE DISCUSSED WITH THE CLASS

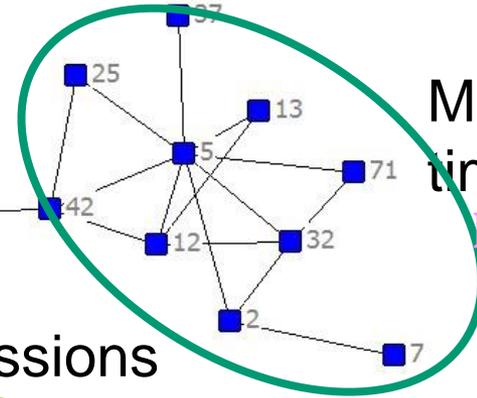
Example: What I need to do – for me to be successful...

- 9
- 21
- 26
- 36
- 39
- 47
- 48
- 79

Study hard,
work hard

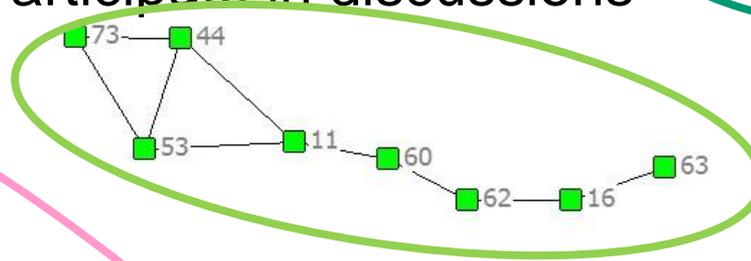


Manage
time well

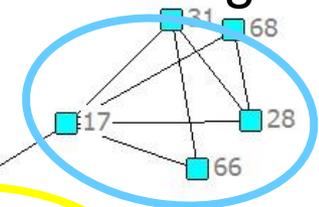


**RESULTS ARE
DISCUSSED
WITH THE
CLASS**

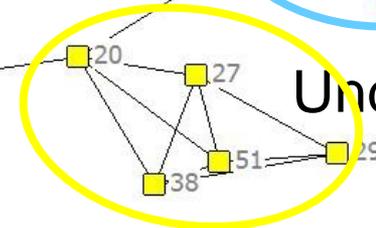
Participate in discussions



Do the
assignments

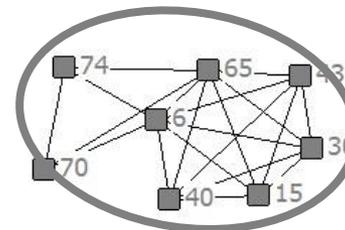
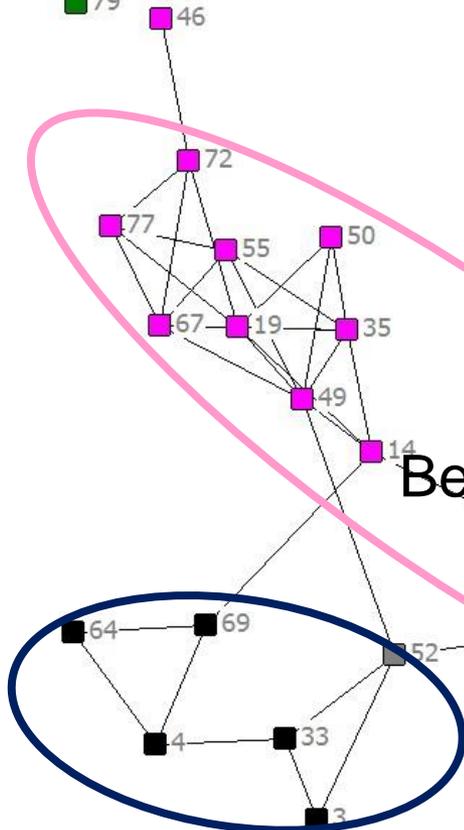


Be prepared and willing
to learn



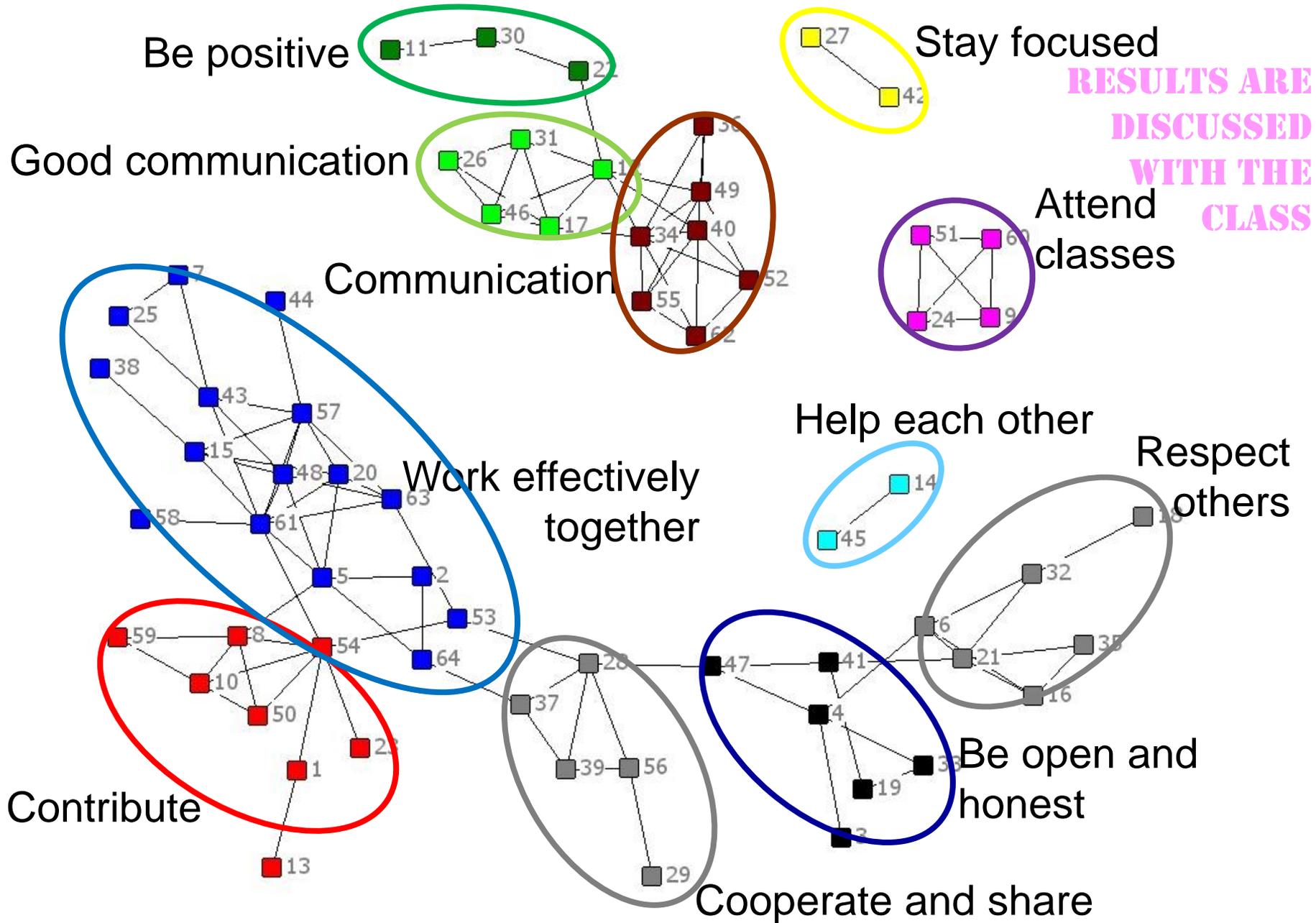
Understand the
concepts

Read about and
research the subject



Attend classes

Example: What my team needs to do – for me to be successful...



Example: These results make up the “learning contract”

Students have identified the key things that each party or stakeholder in the room needs to do for students to be successful.

This is **the learning contract in their own words**.

The lecturer refers to this table as needed during the course to reinforce this “informal” learning contract.

Lecturer	Student	Team
Be clear and concise	Be prepared and willing to learn	Work effectively together
Guide us through the materials	Study hard	Contribute, cooperate and share
Be knowledgeable	Manage time well	Good and effective communication
Be helpful	Attend classes	Be open and honest, and respect others
Make it interesting and fun	Participate in discussions	Attend classes

Step 7. Review the learning purpose of each of the preceding steps

The purpose is to get students to:

- Reflect on the purpose of each of these steps, and the contribution of each to the course
- Improve their understanding of learning

Each step is allocated to a team:

- Teams summarise their reflections and report to the class

This leads to a discussion across the class, and this gives the educator the chance to:

- Clarify learning expectations and commitments
- **Clarify the learning contract, using the students' own words**
- Help students understand that "nothing in the class happens by accident"
- Link the discussion to the University's "graduate qualities" 46

A moment for reflection ...

Why have we started the course in this way?

What do you think is the purpose of each activity?

- 1. Team formation process**
- 2. Finding a name for your team**
- 3. Motivations and expectations exercise**
- 4. Introducing teams to the class**
- 5. Learning content, applications, how to learn exercise**
- 6. Things to do to be successful**

How do these contribute to the course?

Another moment for reflection ...

Some observations on the way that this course will be delivered...

- You will need to learn materials in advance of our class sessions
- You will learn a great deal through discussions in your team
- You will learn a great deal through team and class discussions of exercises that apply the knowledge in this course to actual situations
- The lecturer's main job in class sessions will be to facilitate discussions in a productive way, to summarise key points, and to clarify the key aspects of the course
- This is not a conventional "I lecture, you listen" course



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In summary...

This 7-step orientation session creates and embeds an appropriate learning culture:

- Expectations are made explicit (ie the learning contract is made clear) – and this is done by students themselves
- Students can see that pre-learning is a valuable process for their learning
- It gives students skills and insights to successfully engage with the pre-learning process
- Students are given a sense of ownership of the pre-learning process (through the learning contract)
- Students see that pre-learning is a meaningful approach for teaching – and that they can do this!
- These 7 steps engage students, get their buy-in, and lead them into the subject matter of the course

Example: What do students think about this orientation session ?

Students give this session a very high approval rating. Here are some student responses from the BUSS 3043 SP1 2014 class:

- “made it feel informal and was fun;
- Formed groups with strangers, which forced you to get to know them;
- Got you out of your comfort zone;
- Good to do active things. Better than a typical “sit and listen” workshop;
- Paradigm breaking exercises;
- It helped put me in the mindset to work with other people;
- Be prepared for what should be done in the upcoming sessions;
- Set expectations upfront;
- No-one has ever talked to us about learning”

Finally, if you are interested ...

This session is already being used by educators in Australian, US, Canada, Russia.

I can provide:

- A PowerPoint presentation that is used for the orientation session for entrepreneurship courses;
- A paper describing and discussing this session;
- Support and advice to adapt the presentation to different situations (eg Skype).
- Peter.balan@unisa.edu.au

IEEC 2014

International Entrepreneurship Educators Conference

Education + Engagement = Impact

Newcastle University
3rd-5th September 2014



Flipped Learning: Getting student buy-in and engagement for pre-learning teaching methods



University of
South Australia

**Questions,
comments...**

■ **Peter Balan**

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South Australia

**Now please
evaluate this
session –
thank you!**

Please evaluate this workshop session

Now, please score this session on a scale from 0 to 10



0 = waste of
time

10 = superb

Please:

- **A:** Write a **whole number score** using the scale
- **B:** Give **two reasons** for your score
- **C:** Give **two possible improvements** to this session
- **D:** **Would you recommend** this session to others?

Thank you! *Data collected through this survey will be used to inform improvements at UniSA and could also be used in external publications and presentations. Individual responses will remain confidential and no individuals will be identified. (UniSA Policy A-34.1)*