QUALITATIVE DATA ANALYSIS

FARIZA KHALID

OBJECTIVES

During the workshop, participants will be able to:

- Create an NVivo project
- Code the data accordingly
- Present the data analysis

QUANTITATIVE

Numbers

Points of view of researcher

Reseacher distant

Theory testing

Static

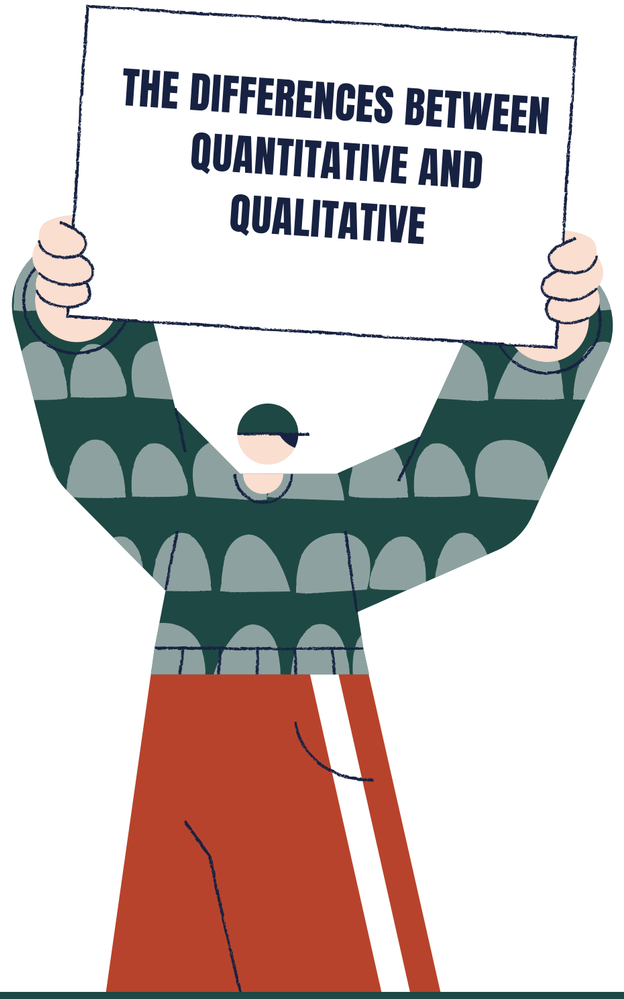
Structured

Generalization

Hard, reliable data

Macro behaviour

Artificial settings



QUALITATIVE

Words

Points of view of participants

Reseacher close

Theory emergent

Process

Unstructured

Contextual undestanding

Rich, deep data

Micro behaviour

Natural settings

interview

observation

QUALITATIVE DATA GENERATION

document analysis

focus group discusson

WHY SHOULD I ANALYZE MY DATA?

a. Producing summaries, abstracts, coding, and memos

b. Finding ways to your display data (matrices, frequency counts, etc.)

c. Draw conclusions

ANALYSIS GOALS

a. Search for commonalities, which lead to categories (know as codes or themes)

b. Search for contrasts/comparisons

ANALYSIS - INTERPRETATION

Analysis is saying: What does the data say.

Interpretation is saying: What does it mean?

NVIVO & QUALITATIVE RESEARCH

- Nvivo's main focus is on qualitative analysis
- Questions of 'how' and 'why' rather than 'how many' or 'how often'

NVIVO KEY TERMS

CODING

- Coding is the process of gathering material by topic, theme or case. For example, selecting a paragraph about water quality and coding it at the node ‘water quality’.

Files\\REFLECTIONS\\Adilah
1 reference coded, 1.67% coverage

Reference 1: 1.67% coverage

Kemudian, pelajar juga dikehendaki berfikir sama ada perbuatan-perbuatan yang ditunjukan sama ada baik atau buruk pernah dilakukan ataupun tidak. Seterusnya, berdasarkan pengetahuan sedia ada dan baru, pelajar dikehendaki faham dan berfikir untuk menjawab soalan yang diberikan dalam game dan mengaplikasikannya dalam kehidupan seharian.

Files\\REFLECTIONS\\Farahin
2 references coded, 3.23% coverage

Reference 1: 0.78% coverage

Elemen yang diintegrasikan ialah elemen warna, manusia, bunyi latar belakang serta suara.

Reference 2: 2.45% coverage

Bahan yang dihasilkan oleh kumpulan kami sangat relevan dengan keperluan pelajar-pelajar sekolah kerana video storytelling yang dihasilkan sangat ringkas, padat dan jelas. Aplikasi game yang berkait dengan video storytelling juga membantu pemahaman terhadap topik yang disampaikan.

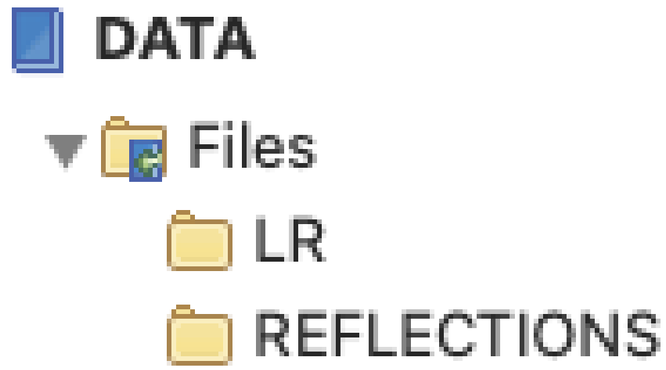
NODES

- Nodes are containers for your coding—they let you gather related material in one place so that you can look for emerging patterns and ideas.

Design process	0	
Duration to complete	14	1
easy going	3	
font	2	
involves affective com...	8	1
iterative assessment	1	
lagnuage	3	
opinion about peer ass...	1	

SOURCES

- Source classifications let you record information about your sources—for example,bibliographical data.



DEDUCTIVE VS INDUCTIVE CODING

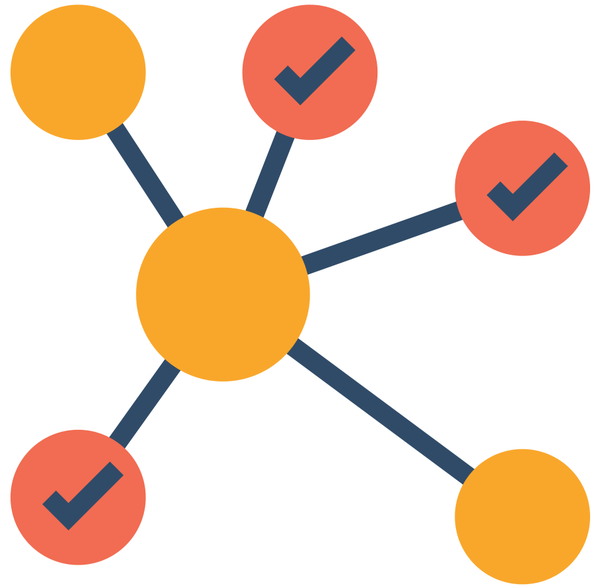
Starts with pre-set themes/codes/categories.

Themes suggested by research literature, advisor, etc.

CREATING NODES

a) Pre-Set Codes
(A pre-set list)

b) Emergent Codes
(the ideas, concepts, actions, relationships, meanings, etc. that come up in the data and are different than the pre-set codes)



QUESTIONS TO HELP YOU TO CREATE CODINGS

- What is this an example of?
- What do I see is going on here?
- What is happening?
- What kind of events are at issue here?
- What is trying to be conveyed?

CODES

- Codes are tags or labels that are attached to the ‘raw’ data (Denscombe, 2010, p. 284). They can take the form of names, initials or numbers and are used systematically to link bits of the data to an idea that relates to the analysis.

CATEGORIES

- Categories are ‘umbrellas’ that consist of a number of codes, and these categories reflect the general idea of classifying the various components of the data under key headings.

PRACTICAL TIPS

- make sure to transcribe your data
- name the file according to the participant's name / group (if invovled focus group interview)
- name the file using the 'author (year) ' if you are doing LR eg: Khalid (2020).

PRESENTING YOUR ANALYSIS USING TABLE

- Although we are dealing with qualitative data, we can still quantify the findings based on the number of the evidences cited, or the number of participants mentioned the themes/sub-themes.
- Having the frequency and percentage will help readers to see the 'patterns' of your findings.

PRESENTING YOUR ANALYSIS USING META MATRIX

- A meta-matrix is a master chart assembling descriptive data from each of several cases in a standard format.
- To construct the meta-matrix, stack up of all of the single cases on one very large sheet. From there move to partition the data further (divide it in new ways) and cluster data that fell together so that contrasts between sets of cases on variables of interest could become clearer.
- This is because cross-case data need to be made comparable via common codes, common displays of commonly-coded data segments and common reporting formats for each case (Miles and Huberman, 1994).

Miles & Huberman, 1994(

Teachers	Professional life phase	Subject taught	Age of students (years)	Teachers' responsibilities in school			Perceived importance	Teaching competency	ICT competency	Job satisfaction	Commitment	Motivation
	P1: 0 to 3 years P2: 4 to 7 years P3: 8-15 years P4: 16-23 years P5: 24-30 years	E: English M: Mathematics S: Science B: Biology C: Chemistry P: Physics	LF: Lower form (13-15 years) UF: Upper form (16-17 years) PU: pre-university (18-19 years)	Administration	Curriculum	Co-curriculum			(+) : perceived themselves as competent (-): perceived themselves as lacking competence	(+): perceived themselves as satisfied with job (-) : perceived themselves as lackingsatisfaction with job	(+) : usually spent time for teaching tasks outside school hours/ brings schholwork home (-): usually spent time for teaching tasks only within school hours/ does not bring back school work	A – self-interest B – family C – friends D – ex-teachers E – subject F – the nature of teaching job G – Economic status
				A1: Senior assistant A2: EMIS Data A3: Timetable coordinator A4: Information technology coordinator A5: Examination coordinator	B1: Head of panel B2: Secretary of subject panel B3: 'Expert teacher' B4: Form teacher	C1: Advisor for students' sports/clubs C2: Advisor for students' organisations	(+) : perceived themselves as important to school (-) : perceived themselves as lack of importance to school	(+) : perceived themselves as skilled (-) : perceived themselves as still needing to improve				
Hanna	P3	B	PU	A5	B3	C1,C2	(+)	(+)	(-)	(+)	n/a	A,D
Eve	P3	P	UF		B4	C1,C2	n/a	(-)	(-)	not sure	(-)	B,F
Kathy	P3	M	LF	A3	B4	C1,C2	(+)	(+), (-)	(-)	(-)	(-)	B,D,E
Sham	P3	M	LF	A4	B3	C1,C2	(+)	(+), (-)	(+)	(+)	(+)	F
Fariha	P4	E	LF,UF	A3	B1	C1,C2	(+)	(+), (-)	(-)	(+)	(+)	A,B,C,E
Aini	P4	C	UF	A1	-	C1,C2	(+)	(+), (-)	(-)	(+)	(+)	A,D
Ismi	P5	C	LF,UF		B1,B3	C2	(+)	(+)	(-)	(+)	(+)	A,B,E

Source: BQ, OTO1, OTO2

Table 4.5: The SSTs as professionals

Teachers	Professional life phase	Subject taught	Age of students (years)	Teachers' tasks in school			Perceived importance	Teaching competency	ICT competency	Job satisfaction	Commitment	Motivation
				Administration	Curriculum	Co-curriculum						
	P1: 0 to 3 years P2: 4 to 7 years P3: 8-15 years P4: 16-23 years P5: 24-30 years	E: English M: Mathematics S: Science B: Biology C: Chemistry P: Physics	LF: Lower form (13-15 years) UF: Upper form (16-17 years) PU: Pre-university (18-19 years)	A1: Senior assistant A2: EMIS Data A3: Timetable coordinator A4: Information technology coordinator A5: Examination coordinator	B1: Head of panel B2: Secretary of subject panel B3: 'Expert teacher' B4: Form teacher	C1: Advisor for students' sports/clubs C2: Advisor for students' organisations	(+) : Perceived themselves as important to school (-) : Perceived themselves as lacking importance to school	(+) : Perceived themselves as skilled (-) : Perceived themselves as still needing to improve	(+) : Perceived themselves as competent (-): Perceived themselves as lacking competence	(+): Perceived themselves as satisfied with job (-) : Perceived themselves as lacking satisfaction with job	(+) : Usually spent time on teaching tasks outside school hours/ brought schoolwork home (-): Usually spent time on teaching tasks only within school hours/ did not bring schoolwork home	A : Self-interest B : Family C: Friends D: Ex-teachers E : Subject F : The nature of teaching G : Economic status
Noni	P1	B,S	LF,UF		B4	C1,C2	(-)	(-)	(+)	(-)	(-)	F
Lim	P1	M	LF,UF		B2	C1,C2	(-)	(-)	(+)	(-)	(+)	A
Hajar	P1	S	LF		B4	C1,C2	(-)	(-)	(+)	(-)	(-)	A,B
Masnida	P2	M	UF		B2	C1,C2	n/a	(-)	(+)	(+)	(+)	F,E
Sherry	P2	E	UF		B4	C1,C2	(+)	(+), (-)	(+)	(+)	(+)	E,F
Noreen	P2	S	LF,UF	A2	B2,B4	C1,C2	n/a	(-)	(+)	n/a	(+)	A,D
Azie	P2	M	LF,UF	A2	B2,B4	C1,C2	(+)	(-)	(+)	n/a	(+)	B,C
Sarah	P3	E	LF,UF		B1	C1,C2	(+)	(+), (-)	(+)	(+)	(+)	A,F,D
Nina	P3	E	LF,UF		B1	C1,C2	(+)	(-)	(-)	(+)	(+)	B,F,G
Hanna	P3	B	PU	A5	B3	C1,C2	(+)	(+)	(-)	(+)	n/a	A,D
Eve	P3	P	UF		B4	C1,C2	n/a	(-)	(-)	not sure	(-)	B,F
Kathy	P3	M	LF	A3	B4	C1,C2	(+)	(+), (-)	(-)	(-)	(-)	B,D,E
Sham	P3	M	LF	A4	B3	C1,C2	(+)	(+), (-)	(+)	(+)	(+)	F
Fariha	P4	E	LF,UF	A3	B1	C1,C2	(+)	(+), (-)	(-)	(+)	(+)	A,B,C,E
Aini	P4	C	UF	A1	-	C1,C2	(+)	(+), (-)	(-)	(+)	(+)	A,D
Ismi	P5	C	LF,UF		B1,B3	C2	(+)	(+)	(-)	(+)	(+)	A,B,E

Table 5.28: Differences between the groups of teachers

Groups	Teachers' general identities														Teachers' identities in relation to their participation in online communities								
	Personal	Professional									Learners			Members of communities	Professional				Learners			Members of communities	
	GPER1	GPRO1	GPRO2	GPRO3	GPRO4	GPRO5	GPRO6	GPRO7	GPRO8	GPRO9	GL1	GL2	GL3	GM1	OPRO1	OPRO2	OPRO3	OPRO4	OL1	OL2	OL3	OM1	OM2
A	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+),(-)	(+)	(+)	(+)	(+)	(+)	(+)	(+),(-)	(+)	(+)	(+)	(+)	(+),(-)	(+)
B	(+)	(+)	(-)	(+)	(-)	(+)	(+)	(+)	(+)	(+),(-)	(+)	(+)	(-)	(+)	(-)	(-)	(+),(-)	(+)	(+)	(+)	(+),(-)	(-)	(+)
C	(-)	(+)	(-)	(+)	(+),(-)	(+)	(+)	(-)	(+),(-)	(+),(-)	(+)	(+),(-)	(-)	(+)	(+),(-)	(+),(-)	(-)	(-)	(+)	(-)	(-)	(-)	(+)
D	(-)	(-)	(-)	(-)	(+)	(-)	(+),(-)	(-)	(-)	(+)	(+)	n/a	(-)	(+)	(+)	(-)	(-)	(-)	(+)	(-)	(-)	(-)	(-)
E	(+)	(+)	(+)	n/a	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)	(+)

Legend		
GPER: Marriage, number of children, age of children	GPRO9: Teachers' actual practice	OL1: Beliefs in the benefits of online CoPs
GPRO1: Professional life phase	GL1: Aspects to be improved	OL2: Beliefs in the importance of online CoPs
GPRO2: Responsibilities in school	GL2: Professional development courses they had attended	OL3: Sharing preferences in online CoPs
GPRO3: Perceived competence in teaching	GL3: Learning preferences	OM1: Openness as members of online CoPs
GPRO4: Perceived competence in using ICT	GM1: Membership in face-to-face communities	OM2: Perceived roles in their online CoPs
GPRO5: Perceived importance	OPRO1: Perceived competency in using online sharing applications	(+): Positive influence on their identities in relation to their participation in online communities
GPRO6: Job satisfaction	OPRO2: Prior knowledge and experience in online sharing activities	
GPRO7: Teachers' commitment towards job	OPRO3: Motivation to engage in online CoPs	(-): Negative influence on their identities in relation to their participation in online communities
GPRO8: Motivation	OPRO4: Commitment towards online CoPs	

PRESENTING YOUR ANALYSIS USING CAUSAL NETWORK

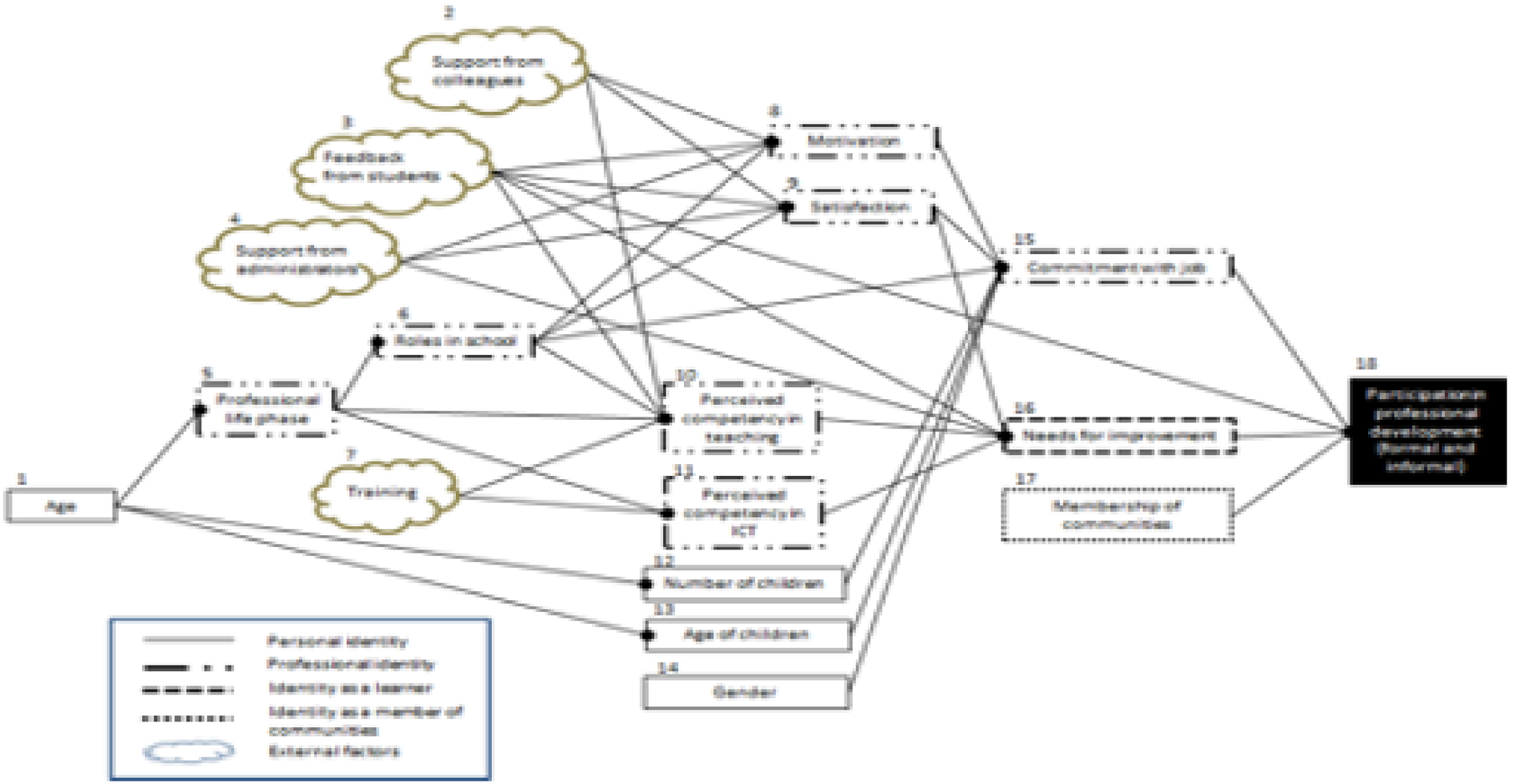
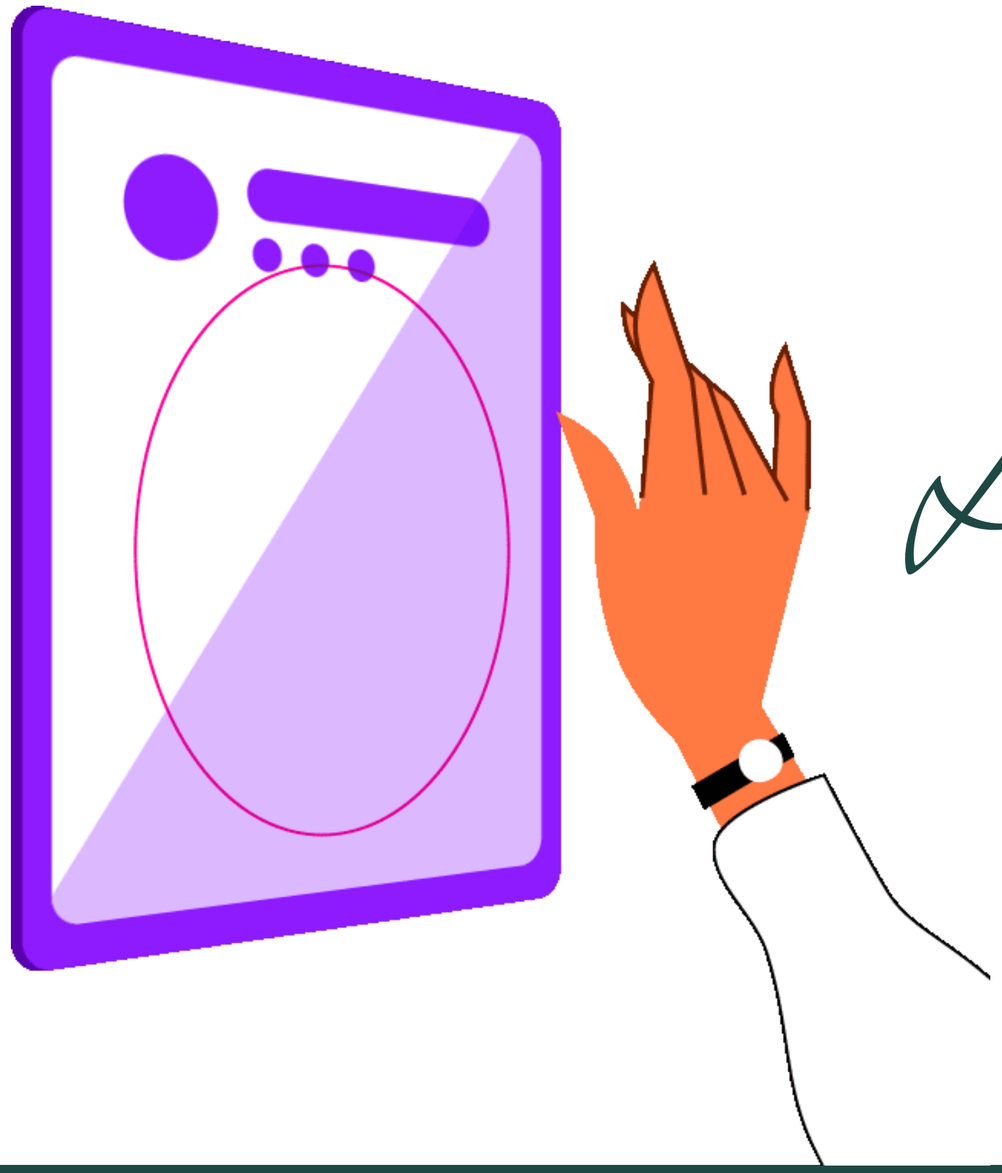


Figure 6.2: Teachers' general identities in relation to their professional development

EXPLAINING THE CAUSAL NETWORK

Apart from teachers' roles in their schools, other external factors also contributed to teachers' levels of motivation and satisfaction with their jobs, as shown in streams 2-8-15-18, 2-9-15-18, 3-8-15-18, 3-9-15-18, 4-8-15-18 and 4-9-15-18. Three main external factors identified from the analysis were: support from colleagues, feedback from students and support from school administrators (see Sections 5.2.2.6 and 5.2.2.8). This finding supports Ahmad (2008), Nias (1989) and Beijaard et al. (1995), who named support from family and colleagues as among the factors influencing teachers' motivation, commitment and satisfaction (see Section 3.6.1). These factors were also found to influence how teachers perceived their competency in teaching (streams 2-10-16-18 and 3-10-16-18). This confirms Beijaard et al. (1995) and Day et al.'s (2007) findings that students play an important role in



Let's get going!