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BYLAE A

VRAELYS IN ENGELS

March 2002

Dear colleague

I am a lecturer at the Vaal Triangle Technikon and currently doing my Ph.D studies at the PU for CHE. In this study, a model for the application of technology into action learning is researched. The nature and extent of Information as Subject area is also being researched. Part of the empirical research is dealt with by the questionnaire attached. You are kindly requested to assist the research process by completing the questionnaire. All completed questionnaires will be treated confidential and anonymous.

It will take approximately 2 minutes to complete Section A, 8 minutes for Section B and 5 minutes for Section C.

I want to thank you in anticipation for your willingness to be instrumental in this regard. I hope to make a humble contribution, in order to expand our subject field.

Please do not hesitate to contact me in case of any enquiries, on how to complete the questionnaire.

Kind Regards

L.A du Plessis (Mrs)
Senior Lecturer (Information Technology)
Vaal Triangle Technikon

Tel (016) 950 9832
E-Mail : plessisl@nt.tritek.ac.za

NB. Let asseblief daarop dat hierdie vraelys op versoek ook in Afrikaans beskikbaar is.

QUESTIONNAIRE To be completed by an Information System educator

SECTION A Staff member information

INSTRUCTIONS: Please cross (X) the appropriate block/s of your choice

1. Gender

Male	Female

2. What is your highest academic qualification related to **Information Systems**

A first year subject as part of a degree/diploma	
A diploma in Information technology/Information systems/Computers	
As second year subject as part of a degree/diploma	
A final year subject as part of a degree/diploma	
An Honours degree in Computer Science / Information systems	
A Masters degree in Computer science / Information systems	
A doctorate degree in Computer Science / Information Systems	
Other (please specify)	

3. What was the date that the highest qualification was obtained? _____

4. Number of years involved in education and training

1	2 - 3	4 – 6	7 - 9	10+

5. Number of year's industrial experience

None	1	2 - 3	4 - 6	7 – 9	10+

6. What is your highest academic qualification related to **Education**?

6.1 No formal qualification	
6.2 Higher Education diploma	
6.3 Diploma in Tertiary education	
6.4 Educational subjects as part of diploma/degree	
6.5 Any other – please specify:	

SECTION B Institutional Information

INSTRUCTIONS: Answer questions 1- 11 by crossing (X) the appropriate block/s of your choice

1. Which if the following specialization areas are currently being offered at your institution?

1.1 Business Applications	
1.2 Software Development	
1.3 Communication Networks	
1.4 Web and Application Development	
1.5 Information Systems and –Technology Management	
1.6 Intelligent industrial Systems	
1.7 Support Services	
1.8 Technical Applications	
1.9 Hardware and Computer Architecture	

2. Total number of first **year Information System** learners at your institution in 2001

<100	100-200	200-300	300-400	400-500	500-600	600-700	700-800

3. Any numbers more than this, please specify: _____

4. Total number of **final year Information System** learners at your institution in 2001

<100	100-200	200-300	300-400	400-500	500-600	600-700	700-800

5. Any numbers more than this, please specify: _____

6. Do your institution have computer labs that is available for learners to be used at their own time (Besides formal class hours)?

Yes	No

7. How many computers are available in these labs for learners to work on?

<100	100-200	200-300	300-400	400-500	500-600	600-700	700-800

8. Any numbers more than this, please specify: _____

9. Are these computers available to all the learners of the institution or only for Information System learners?

For all learners	Only IS learners	Some are reserved, some are available to other learners

10. What times are these facilities available to be used by learners?

10.1 24 Hours	
10.2 Only after hours	
10.3 Weekends	
10.4 Holidays	

11. Is it a prerequisite for Information System learners to have their own computers/ or have access to a computer?

Yes	No

12. Please reflect on the following statements, which are indicators of current realities and future goals that reflect the situation at your institution regarding the use of technology

Completing the first 2 columns: Current Realities

In the first two boxes opposite each statement regarding technology, score your institution's **current** technology practices and policies using the scale below.

Performance of Technology in Practice
0 = Not in place at this time
1 = Some users/teachers have equipment and are exploring / piloting / developing
2 = Many users/teachers have good computer and technology skills and are actively engaged with the technology
3 = Most users/teachers have mastered complex technologies

Technology Policies
0 = Not in place
1 = Not so important
2 = Somewhat important
3 = Very important

Completing the last columns: Future Goals

Next, decide how important each of the statements is for **future goals**. Fill in the boxes opposite those indicators where you think your institution should concentrate on growth using the scale below. Do the same thing in the policy column using the scale below.

Note: In deciding where to place your technology priorities, also take practicality into account. Be realistic about what your institution can afford at this time.

Future Goals
0 = not a priority for improvement at this time/not being considered
1 = will concentrate on improvement but a low priority
2 = will concentrate on improvement, medium priority
3 = will concentrate on improvement and high priority

Statements regarding Technology	Current Realities		Future Goals	
	Practice	Policy	Practice	Policy
Access				
12.1 Institution is connected to Internet and other resources				
12.2 Technology resources are conveniently located for individual (as opposed to centralized) use				
12.3 Interconnective – Learners and teachers interact in communicating in diverse ways (E-mail, Fax, direct etc.)				
12.4 All Learners have access to rich, challenging learning opportunities and interactive generative instructions				
Operability				
12.5 Interoperable - capable of exchanging data easily among diverse formats and Technologies				
12.6 Open architecture – Allow users to access third part hardware/software				

Statements regarding Technology	Current Realities		Future Goals	
	Practice	Policy	Practice	Policy
12.6 Transparent – Learners are not concerned – and do not need to be - about how the hardware/software operates				
Organization				
12.7 Distributed – Technology are not centralized, but exist across any number of people, environments and situations				
12.8 Designed for user contributions – users can provide input resources to the technology / system on demand				
12.9 Designed for collaborative projects – It is designed to facilitate communication among users with diverse systems / equipment				
Engageability				
12.11 Access to challenging tasks – Technology allow access to tasks, data and learning opportunities that stimulate thought and enquiry				
12.12 Enables learning by doing – technology offers access to simulations, goal-based learning and real-world problems				
12.13 Provides guided participation – technology responds intelligently to user and is able to diagnose and prescribe new learning				
Ease of Use				
12.14 Effective helps – technology provides help indices that are more than glossaries, may provide procedures for tasks and routines				
12.15 User friendliness/user control – technology is free from over complex procedures, user can easily access data and tools on demand				
12.16 Fast – Technology has a fast processing speed and is not "down" for long periods of time				
12.17 Available training & support training is readily and convenient available, as is ongoing support				
12.18 Provides just enough information just in time – Technology allows for random access, multiple points of entry and different levels and types op information				
Functionality				
12.19 Diverse tools – technology enables access to full diversity of generic and context-specific tools basic to learning and working in the 21st century				
12.20 Media use – Technology provides opportunities to use media technologies				
12.21 Promotes programming and authoring – Technology provides tools eg. "wizards" that are used to make other tools				
12.22 Supports project design skills – technology facilitates the development of skills related to project design and implementation				

SECTION C Scope And Extent Of Information System Subject Area

1. The following are significant subareas of the Information Systems Curriculum that indicates **Knowledge/Competency** levels for information system learners.

Please indicate to which level you feel each of the **topics should be covered**, either in the first, second or third year. You may use the following levels:
0– no knowledge;
1 – recognition;
2 – literacy;
3 – usage;
4 – application

Eg. You may feel for instance a certain topic may be introduced in the first year, covered in more detail and the second year and specialize in the third year. Then your table will have the following entry:

Subarea	2	3	4

Learner level (Academic year)	**First**	**Second**	**Third**
1.1 Algorithmic design and data, object and file structures			
1.2 Align IS planning with enterprise planning			
1.3 Artificial intelligence			
1.4 Computer systems hardware			
1.5 Computer systems software			
1.6 Data administration and access to corporate information resources			
1.7 Data warehousing			
1.8 Database: modeling, construction, tools			
1.9 Decision Making			
1.10 Differentiate between the role of information systems within a company and their role in a global environment			
1.11 General organizational theory			
1.12 Information resource management			
1.13 Information System Planning			
1.14 Information systems planning, analysis and design			
1.15 Information Technology and organizational systems			
1.16 IS implementation and testing strategies			
1.17 IS operation and maintenance			
1.18 IS support services			
1.19 Knowledge regarding the use of software packages			
1.20 Legal and ethical aspects of IS			
1.21 Literacy in computers and information systems			
1.22 Management of IS function			
1.23 Managing the process of change			
1.24 Networking and telecommunications			
1.25 Object oriented database design			
1.26 Programming: languages and implementation			
1.27 Project management			
1.28 Risk management			
1.29 Software Development			

Learner level (Academic year)	First	Second	Third
1.30 Strategic role of information systems in organizations			
1.31 System security			
1.32 Systems integration			
1.33 Systems theory and quality			
1.34 Teams, personal, and interpersonal skills			
1.35 Any other topics that you feel should be covered:			

INSTRUCTIONS: Answer Questions 2- 9 by crossing (X) the appropriate block/s of your choice

2. Please indicate which of the following teaching practices are currently applied in your Information System class:

2.1. Demonstrations	
2.2. Discussions	
2.3. Group work	
2.4. Self study	
2.5. Research projects	
2.6. Continuous evaluation	
2.7. Self paced Learning	
2.8. Formal lectures	
2.9. Case studies	
2.10 Any other, briefly describe please:	

3. If you indicated in Question 2 that you do apply **group work,** answer Questions 3.1 and 3.2.

3.1. What is the approximate size of the groups?

2	3	4	5	6	7	8+

3.2. The learners that are involved in the group project

3.2.1 Are from the same level (academic year)	
3.3.2. Are from different levels (eg. second and third year learners)	
3.2.3 It depends on the type of group project	

4. Have any learners at your institution, completed subjects via E-learning or any other distributed environment?

Yes	No

4.1 If you answered yes in Question 4 – were any of the following problems experienced with the process?

4.1 Financial	
4.2 Administrative problems	
4.3 Learning material	
4.4 Lack of direct interaction	
4.5 Lack of support from own institution	
4.6 Lack of support from other institution	
4.7 Briefly describe the problems that were experienced:	

5. The types of projects that are given to final year Information System learners to be solved /developed, can be described as:

5.1 Prototypes	
5.2 Fully functional systems	
5.3 Systems developed for real business requirements	
5.4 Systems for simulated business requirements	

6. Projects being developed / designed by final year Information System learners are being evaluated by one or more of the following:

6.1 IS lecturer	
6.2 Other lecturers	
6.3 People from industry	
6.4 Peer evaluation (by fellow learners)	

7. What are the most frequent teaching technologies currently used in your Information System class?

7.1 Transparencies	
7.2 Writing on the board	
7.3 Preparing lessons using Powerpoint	
7.4 Multimedia	
7.5 Interactive training software	
7.6 CBT software which allow the learners to progress at their own pace and at their own time	
7.7 Any other = please specify	

8. During lecturing time, what is the average size of the Information System classes?

<20	20-30	30-40	40-50	>50

9 Are there any other tutors or facilitators available during lecturing hours to assist learners?

Yes	No

10. Indicate to what extent you agree with the following statements:

1 – Do not agree at all
2 – Agree to a limited extent
3 - Agree to a large extent
4 – Fully agree

10.1 Learners leaving the institution have a professional sense of self-awareness	1	2	3	4
10.2. Learners leaving the institution are prepared to be life-long learners	1	2	3	4
10.3 Most of the project that learners do are done in their own time and not during formal class time	1	2	3	4
10.4 The majority of projects are done in groups	1	2	3	4
10.5 For a project given to a learner, there are more than one solution, the learner however, has to choose an optimal solution	1	2	3	4
10.6 Critical crossfield outcomes like communication, presentations, problem solving, organizing, management and responsibility are formally assessed as part of Information Systems	1	2	3	4
10.7 Qualified first degree IS-learners find it easy to obtain a position in the market	1	2	3	4
10.8 Learners who exit at the end of their first year with a certificate are equipped for certain entry-level positions in the market	1	2	3	4
10.9 Learners who exit at the end of their second year will have the necessary skills to fulfill a suitable position in the IT market	1	2	3	4
10.10Learners find it difficult to keep up with the rapid changes occurring in the information technology world	1	2	3	4

11. Please reflect on the following statements, which are indicators of engaged learner learning, by ranking your current realities and future goals, for both practices and policies at your institution for each statement on a scale from 0 through 3.

The following two headings will appear on the table
Practice scores reflect what is **actually in place** in your lecturing rooms and institution now and where you want to see growth.
Policy scores refer to what your institution **thinks is important now and where you think there is a need for more emphasis in the future.** For an indicator to be part of current policy, it must appear in some kind of policy document such as a mission statement, curriculum framework, assessment system, organization plan, or some other plan that has been accepted in the institution.

Completing the first 2 columns: Current Realities

In the first two boxes next to each statement, you have to assign a score to your current learning practices and policies in Information System classes
Please use the following indicators:

Engaged Learning Practices	Engaged Learning Policies
0 = Not in place at this time	0 = Not in place
1 = Some educators are exploring/developing	1 = Not so important
2 = Many educators have good skills in these areas	2 = Somewhat important
3 = Most users/teachers have mastery, and practice is very widespread; it is a major strength for the institution	3 = Very important

Completing the last 2 columns: Future Goals

Next, decide how important each of the statements is for **future goals**. Fill in the boxes opposite those indicators where you think your institution should concentrate on growth using the scale below. Do the same thing in the policy column using the scale below.
Future Goals
0 = not a priority for improvement at this time/not being considered
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2 = will concentrate on improvement, medium priority
3 = will concentrate on improvement and high priority

Statements regarding engaged Learning	Current Realities		Future Goals	
	Practice	Policy	Practice	Policy
Vision of Learning				
11.1 Learners are involved in setting goals, choosing tasks, developing assessments and standards for the task. Always has the big picture of learning and next steps in mind				
11.2 The learner actively develops a variety of thinking / learning strategies				
11.3 Energized by learning - learners are not dependant on rewards from others/ has a passion for learning				
11.4 Collaborative - Learners develop new ideas and understanding in conversation and work with others				
Tasks				
11.5 Authentic – Tasks pertain to the real world				
11.6 Challenging – difficult enough to be interesting but not totally frustrating				

Statements regarding engaged Learning	Current Realities		Future Goals	
	Practice	Policy	Practice	Policy
11.7 Multidisciplinary – involves integrating disciplines to solve problems and address issues				
Assessment				
11.8 Performance-based – Involving a performer or demonstration, for a real audience and a real purpose				
11.9 Generative – Assessment having meaning for the learner				
11.9 Seamless and ongoing – Assessment is part of instruction and vice versa. Learners learn during assessment				
11.11 Equitable – assessment is culture fair				
Instructional Model				
11.12 Interactive – teacher/ technology program is responsive to users need.				
11.13 Generative – Instruction is oriented to construct meaning, meaningful experiences				
Learning Context				
11.14 Collaborative – Instruction conceptualize students as part of a learning community				
11.15 Knowledge-building – learning experiences are set up to bring multiple perspectives to solve problems such that each perspective contributes to shared understanding for all				
11.16 Empathetic – learning environment are set up for valuing diversity, multiple perspectives, strengths				
Grouping				
11.17 Heterogeneous – Small groups from different ability levels and background				
11.18 Equitable – Small groups organized so that over time all students have challenging learning tasks / experiences				
11.19 Flexible – Groups are organized so that for different instructional purposes, each person is a member of a different group/ works with different people				
Teacher Roles				
11.20 Facilitator – Engages in negotiation, stimulates and monitors discussion and project work but does not control				
11.21 Guide – Help students to construct their own meaning				
11.22 Co-learner/Co-investigator – The teacher considers him/herself as a learner/ willing to take risks to explore areas outside his or her expertise				
Student Roles				
11.23 Explorer – students can explore new ideas/tools/ guidance in research				
11.24 Cognitive apprentice – relationship with a mentor who coaches the learner to develop ideas and skills that simulate the role of professionals				
11.25 Teacher – students are encouraged to teach others in formal and informal contexts				
11.26 Producer – students develop products of real use to themselves or to others				

BYLAE B

VRAELYS IN AFRIKAANS

March 2002

Dear colleague

I am a lecturer at the Vaal Triangle Technikon and currently doing my Ph.D studies at the PU for CHE. In this study, a model for the application of technology into action learning is researched. The nature and extent of Information as Subject area is also being researched. Part of the empirical research is dealt with by the questionnaire attached. You are kindly requested to assist the research process by completing the questionnaire. All completed questionnaires will be treated confidential and anonymous.

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Senior Lecturer (Information Technology)
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Tel (016) 950 9832
E-Mail : plessisl@nt.tritek.ac.za

VRAELYS Voltooi deur 'n Inligtingstelselopvoeder

AFDELING A Personeelinligting

INSTRUKSIES: Merk asb. met 'n kruisie (X) die toepaslike blokkie/s van u keuse

1. Geslag

Manlik	Vroulik

2. Naam van instansie waar u tans werksaam is: _____

3. Wat is u hoogste kwalifikasie verwant aan **Inligtingstelsels (IS)**?

3.1 Eerstejaarsvak as deel van 'n graad/diploma	
3.2 Tweedejaarsvak as deel van 'n graad/ diploma	
3.3 Finalejaarsvak as deel van 'n graad/ diploma	
3.4 Honneursgraad in Rekenaarwetenskap/ Inligtingstelsels	
3.5 Meestersgraad in Rekenaarwetenskap / Inligtingstelsels	
3.6 Doktorsgraad in Rekenaarwetenskap/ Inligtingstelsels	
3.7 Ander (spesifiseer asseblief)	

4. Op wattter datum het u hierdie hoogste kwalifikasie behaal? _____

5. Aantal jare wat u betrokke is in onderwys en opleiding

0-2	2 – 4	4 – 6	6 – 9	10+

6. Aantal jare industriële ervaring

Geen	0-2	2 - 4	4 – 6	6 – 9	10+

7. Wat is u hoogste kwalifikasie verwant aan **opvoeding**?

7.1 Geen formele kwalifikasie	
7.2 Hoër Onderwys Diploma	
7.3 Diploma in Tersiêre Onderwys	
7.4 Opvoedkunde as deel van 'n graad/diploma	
7.5 Enige ander – spesifiseer asseblief:	

AFDELING B Institusionele Inligting
INSTRUKSIES: Antwoord vrae 1- 11 deur 'n kruisie (X) te trek in die blokkie/s van u keuse

1. Watter van die volgende spesialiseringsrigtings word tans by u instansie aangebied?

1.1 Besigheidstoepassings	
1.2 Sagteware-Ontwikkeling	
1.3 Kommunikasienetwerke	
1.4 Web- en Toepassingsontwikkeling	
1.5 Inligtingstelsel- en Tegnologiebestuur	
1.6 Intelligente Industriële Stelsels	
1.7 Ondersteuningstelsels	
1.8 Tegniese Toepassings	
1.9 Hardeware en Rekenaarargitektuur	

2. Indien al die spesialiseringsrigtings nie by u instansie aangebied word nie, wat is die rede/s?

2.1 Tekort aan personeel met geskikte vaardighede	
2.2 Tekort aan tegnologie	
2.3 Daar is nie 'n groot aanvraag vanaf die industrie in ons omgewing vir gekwalifiseerde leerders in 'n sekere spesialiseringsarea nie.	
2.4 Enige ander rede, beskryf asb kortliks:	

3. Totale aantal **eerstejaar**-Inligtingstelselleerders by u instansie in 2001

<100	100-200	200-300	300-400	400-500	500-600	600-700	700-800

4. Enige aantal meer as dit, spesifiseer asseblief: _____

5. Totale aantal **finale-jaar**-Inligtingstelselleerders by u instansie in 2001

<50	50-150	150-200	200-250	250-300	300-350	350-400	400-450

6. Enige aantal meer as dit, spesifiseer asseblief: _____

7. Het u instansie rekenaarlaboratoriums wat beskikbaar is vir leerders om in hulle eie tyd gebruik te word (buiten formele klasure)?

Ja	Nee

8. Hoeveel rekenaars is beskikbaar in hierdie laboratoriums vir leerders om op te werk?

<100	100-200	200-300	300-400	400-500	500-600	600-700	700-800

9. Enige aantal meer as dit, spesifiseer asseblief: _____

10. Is hierdie rekenaars beskikbaar vir al die leerders van die instansie of net vir Inligtingstelselleerders?

Vir alle leerders	Slegs IS-leerders	Party is gereserveer, ander is beskikbaar vir ander leerders

11. Watter tye is hierdie fasiliteite beskikbaar om deur leerders gebruik te word?

11.1 24 Uur	
11.2 Slegs na-ure	
11.3 Naweke	
11.4 Vakansies	
11.5 Enige ander reëlings, beskryf asb:	

12. Is dit 'n voorvereiste vir Inligtingstelselleerders om hulle eie rekenaars of toegang tot 'n rekenaar te hê?

Ja	Nee

13. Oorweeg asseblief die volgende stellings, wat aanduidings is van huidige realiteite en toekomstige doelwitte wat die huidige situasie by u fakulteit reflekteer, rakende die gebruik van tegnologie. Die volgende 2 opskrifte verskyn in die tabel:
    - **Praktyk** reflekteer wat is **tans in plek** in u klaskamers en fakulteit en waar sal u graag groei wil sien.
    - **Beleid** verwys na wat u fakulteit **dink is tans belangrik en waar u dink daar is 'n behoefte vir meer beklemtoning in die toekoms.** Vir 'n stelling om deel te wees van die huidige beleid, moet dit in een of ander beleidsdokument soos die missie stelling, kurrikulum raamwerk, organisatoriese plan, of 'n ander plan wat deur u fakulteit aanvaar is, verskyn.

INSTRUKSIES: Voltooiing van die eerste 2 kolomme: Huidige Realiteite

In die eerste twee kolomme teenoor elke stelling rakende tegnologie, rangeer u fakulteit se huidige tegnologie gebruik en beleid deur van die volgende skaal gebruik te maak:

Werkverrigting van tegnologie in die praktyk	Tegnologie Beleid
1 = Nie huidig in plek nie	1 = Nie in plek
2 = Sommige gebruikers/opvoeders het toerusting en is besig met ondersoek/eksperimentering/ ontwikkkeling	2 = Nie so belangrik 3 = Redelik belangrik 4 = Baie belangrik
3 = Baie gebruikers/onderwysers het goeie rekenaar en tegnologie vaardighede en is aktief besig met die tegnologie	
4 = Meeste gebruikers/opvoeder het komplekse tegnologieë bemeester	

INSTRUKSIES: Voltooiing van die laaste 2 kolomme: Toekomstige Doelwitte

Volgende, besluit hoè belangrik elk van hierdie stellings is vir **toekomstige doelwitte** rakende die **praktyk en beleid** by u fakulteit. Voltooi die laaste 2 kolomme teenoor die stellings waar u dink u fakulteit moet meer konsentreer op groei rakende die praktyk of beleid.

Nota:
- Tydens u oorweging om te besluit waar u tegnologiese prioriteite plaas, moet u ook die praktiese realiteit in aanmerking neem. Wees realisties oor wat u fakulteit op hierdie stadium kan bekostig.
- Kyk na ongebalanseerdhede tussen u praktykstellings en u beleidstellings ten einde prioriteite vir die toekoms te identifiseer

Toekomstige Doelwitte rakende **praktyk en beleid**
1 = nie 'n prioriteit vir verbetering op hierdie stadium nie / word nie oorweeg nie
2 = wil graag konsentreer op verbetering, maar lae prioriteit
3 = wil graag konsentreer op verbetering, medium prioriteit
4 = wil graag konsentreer op verbetering en hoë prioriteit

Stellings Rakende Tegnologie	Huidige Realiteit		Toekomstige doelwitte	
	Praktyk	Beleid	Praktyk	Beleid
Toegang				
13.1 Fakulteit is verbind aan Internet en ander hulpbronne				
13.2 Tegnologiese-hulpbronne is gerieflik geleë vir individuele (teenoor gesentraliseerde) gebruik				
13.3 Leerders en opvoeders verkeer interaktief deur op diverse maniere met mekaar te kommunikeer (E-pos, Faks, direk ens.)				
13.4 Alle leerders het ryk, uitdagende leergeleenthede en interaktiewe, kreatiewe en skeppende instruksies				
Werkbaarheid				
13.5 Oordraagbaar - in staat om data maklik tussen diverse formate en tegnologieë uit te ruil				
13.6 Oop argitektuur – Laat gebruikers toe om derde party hardeware/sagteware te gebruik.				
13.7 Deursigtig – Leerders kan die hardeware/ sagteware gebruik sonder dat dit nodig is om die tegniese werking van die hardeware / sagteware te verstaan				
Organisasie				
13.8 Verspreid – Tegnologie is verspreid en bestaan tussen enige aantal mense, omgewings en situasies.				
13.9 Ontwerp vir bydrae deur die gebruiker – gebruikers kan invoerhulpbronne aan die tegnologie stelsel op versoek verskaf				
13.9 Ontwerp vir samewerkingsprojekte – dit is ontwerp om kommunikasie te fasiliteer tussen gebruikers van diverse stelsels/ hulpmiddels				
Benutting				
13.11 Toegang tot uitdagende take – Tegnologie verskaf toegang tot take, data en leergeleenthede wat denke en navrae stimuleer				
13.12 Maak 'leer deur doen' moontlik – Tegnologie verskaf toegang tot simulasies, doel-gebaseerde leer en werklike wêreld probleme				
13.13 Verskaf gerigte deelname – Tegnologie reageer intelligent op die gebruiker en is in staat om nuwe leer te diagnoseer en te beskryf				
Gemak Van Gebruik				
13.14 Effektiewe hulp – Tegnologie verskaf hulpindekse wat meer is as net 'n lys, wat ook prosedures vir take en roetines voorstel				
13.15 Gebruikervriendelik/ gebruiker kontrole – tegnologie is vry van komplekse prosedures en gebruikers kan maklik data en hulpmiddels op aanvraag bekom				
13.16 Vinnig – Tegnologie het 'n vinnige verwerkingspoed				
13.17 Tegnologie is nie "af" vir lang tydperke nie				
13.18 Beskikbaar – opleiding en ondersteuning is maklik en gerieflik beskikbaar, so ook volgehoue ondersteuning				
13.19 Verskaf net genoeg inligting op 'n gegewe tyd – Tegnologie laat willekeurige toegang toe, meervoudige toegangspunte en verskillende vlakke en tipes van inligting				
Funksionaliteit				
13.20 Diverse Gereedskap – Tegnologie maak toegang moontlik na 'n diversiteit van generiese en inhoud-spesifieke hulpmiddels wat basies benodig word vir leer en werk in die 21ste eeu				
13.21 Media gebruik – Tegnologie verskaf geleenthede om mediategnologie te gebruik				
13.22 Promoveer programmering en self-skrywe - Tegnologie verskaf hulpmiddels soos bv. "wizards" wat gebruik kan word om ander hulpmiddels te maak				
13.23 Ondersteuningsvaardighede rakende projekontwerp – Tegnologie fasiliteer die ontwikkeling van vaardighede wat verwant is aan die ontwerp en implementering van 'n projek				

AFDELING C **Aard en Omvang van Inligtingstelselvakgebied**

1. Die volgende is belangrike onderafdelings van die Inligtingstelselkurrikulum wat die onderskeie kennis/vaardighede aandui vir **Inligtingstelselleerders**.

INSTRUKSIES: Dui asseblief aan tot op watter vlak u voel elk van hierdie onderwerpe behandel moet word, hetsy in die eerste, tweede of derde jaar. U mag van die volgende vlakke gebruik maak:
1 – geen kennis;
2 – herkenning;
3 – vaardigheid – teoretiese kennis;
4 – gebruik;
5 – toepassing

Vb. U mag byvoorbeeld voel dat 'n sekere onderwerp bekendgestel word in die eerste jaar, meer in diepte gedek word in die tweede jaar en gespesialiseer word in die derde jaar. Dan gaan u tabel die volgende inskrywing bevat:

Subarea	2	3	4

Leerdervlak (Akademiese jaar)	**Eerste**	**Tweede**	**Derde**
1.1 Algoritmiese ontwerp en data-, objek- en leêrstrukture			
1.2 Koördineer IS-beplanning met organisasiebeplanning			
1.3 Kunsmatige intelligensie			
1.4 Rekenaarstelselhardeware			
1.5 Rekenaarstelselsagteware			
1.6 Data-administrasie en toegang tot korporatiewe bronne van inligting			
1.7 Datapakhuise (data warehousing)			
1.8 Databasismodellering, -konstruksie, -hulpmiddels			
1.9 Besluitneming			
1.10 Onderskei tussen die rol van Inligtingstelsels binne 'n maatskappy en die stelsel se rol in 'n globale omgewing			
1.11 Algemene organisatoriese teorie			
1.12 Inligtinghulpbronbestuur			
1.13 Inligtingstelselbeplanning			
1.14 Inligtingstelselbeplanning, -analise en -ontwerp			
1.15 Rol van Inligtingtegnologie in organisatoriese stelsels			
1.16 IS- implementering en toetsstrategieë			
1.17 IS-bedryf en instandhouding			
1.18 IS-ondersteuningsdienste			
1.19 Kennis rakende die gebruik van sagteware pakette			
1.20 Wettiese en etiese aspekte rakende IS			
1.21 Geletterdheid in rekenaars en inligtingstelsels			
1.22 Bestuur van IS-funksie			
1.23 Bestuur die proses van verandering			
1.24 Netwerke en telekommunikasie			
1.25 Objekgeoriënteerde-databasisontwerp			
1.26 Programmering: tale en implementering			
1.27 Projekbestuur			

Leerder vlak (Akademiese jaar)	Eerste	Tweede	Derde
1.28 Kwaliteitsversekering gedurende stelselontwikkeling			
1.29 Risikobestuur			
1.30 Sagteware ontwikkeling			
1.31 Strategiese rol van inligtingstelsels in organisasies			
1.32 Stelselsekuriteit			
1.33 Stelselintegrasie			
1.34 Stelselteorie en –kwaliteit			
1.35 Spanne, personeel en interpersoonlike vaardighede			
1.36 Enige ander onderwerpe wat u voel behandel moet word:			

INSTRUKSIES: Beantwoord vrae 2- 9 deur 'n kruisie (X) in die toepaslike blokkie/s van u keuse te maak

2. Dui asseblief aan watter van die volgende onderrigstrategieë word huidiglik binne u IS-klas toegepas:

2.1. Demonstrasies	
2.2. Besprekings	
2.3. Groepwerk	
2.4. Selfstudie	
2.5. Navorsingsprojekte	
2.6. Deurlopende evaluering	
2.7. Leer teen eie tempo	
2.8. Formele lesings	
2.9. Gevallestudies	
2.10 Enige ander, beskryf asb. kortliks:	

3. Indien u in Vraag 2 aangedui het dat u van **groepwerk** gebruik maak, beantwoord vrae 3.1 en 3.2

3.1. Wat is die gemiddelde grootte van die groepe?

2	3	4	5	6	7	8+

3.2. Die leerders wat betrokke is in die groepprojek:

3.2.1 Is van dieselfde vlak (akademiese jaar)	
3.3.2. Is van verskillende vlakke (bv. tweede en derde jaar leerders)	
3.2.3 Dit hang van die tipe groepprojek af	

4. Het enige leerders by u fakulteit al enige vakke via elektroniese leer (E-learning) of enige ander verspreide omgewing voltooi?

Ja	Nee

4.1 Indien u **ja** geantwoord het in Vraag 4, het u enige van die volgende probleme ondervind met die proses?

4.1 Finansieel	
4.2 Administratiewe probleme	
4.3 Studiemateriaal	
4.4 Gebrek aan direkte interaksie	
4.5 Gebrek aan ondersteuning vanaf u eie fakulteit	
4.6 Gebrek aan ondersteuning vanaf ander fakulteit	
4.7 Beskryf kortliks die probleme wat u ervaar het:	

5. Die tipe projekte wat aan finale jaar Inligtingstelsel leerders gegee word om op te los/ ontwikkel te word, kan beskryf word as:

5.1 Prototipes	
5.2 Volle funksionele stelsels	
5.3 Stelsels wat ontwikkel is vir werklike besigheidsbehoeftes	
5.4 Stelsels vir gesimuleerde besigheidsbehoeftes	

6. Projekte wat ontwikkel / ontwerp word deur finale jaar IS-leerders, word geëvalueer deur een of meer van die volgende:

6.1 IS-opvoeders	
6.2 Ander opvoeders	
6.3 Persone vanaf die industrie	
6.4 Eweknie evaluasie (deur mede-leerders)	

7. Wat is die mees algemene onderrig-tegnologieë wat u huidiglik in u Inligtingstelselklas gebruik?

7.1 Transparante	
7.2 Skryf op die bord	
7.3 Voorbereiding van lesse deur voorstellings-sagteware (soos Powerpoint)	
7.4 Multimedia	
7.5 Interaktiewe opleidingsagteware	
7.6 ROO sagteware wat die leerder toelaat om teen sy eie tempo te vorder en op sy eie tyd	
7.7 Kommunikasiesagteware (bv. NetOpSchool)	
7.8 Enige ander (spesifiseer asseblief)	

8. Gedurende klastyd, wat is die gemiddelde grootte van 'n Inligtingstelselklas?

<20	20-30	30-40	40-50	>50

9 Is daar enige ander tutors of fasiliteerders beskikbaar om hierdie leerders te assisteer?

Ja	Nee

10. Dui aan tot watter mate u ooreenstem met die volgende stellings:

1 – Stem glad nie saam nie
2 – Stem saam tot 'n beperkte mate
3 - Stem tot 'n groot mate saam
4 – Stem ten volle saam

10.1 Leerders wat die instansie verlaat het het 'n professionele gevoel van selfbewustheid	1	2	3	4
10.2. Leerders wat die instansie verlaat is voorbereid om lewenslange leerders te wees	1	2	3	4
10.3 Die meeste van die projekte wat leerders doen, word in hulle eie tyd, buite normale klasure voltooi	1	2	3	4
10.4 Die oorgrootte meerderheid van projekte word in groepe gedoen	1	2	3	4
10.5 Vir 'n projek wat aan 'n leerder gegee word, is daar meer as een oplossing, die leerder moet egter 'n optimale oplossing kies	1	2	3	4
10.6 Kritiese interdissplinêre uitkomste soos kommunikasie, voorleggings, probleemoplossing, organisering, bestuur en verantwoordelikheid word formeel geassesseer as deel van Inligtingstelsels	1	2	3	4
10.7 Gekwalifiseerde eerste-graad IS-leerders bekom maklik 'n posisie in die mark	1	2	3	4
10.8 Leerders wat aan die einde van hulle eerste jaar met 'n sertifikaat uittree is geskik vir sekere intreevlakposisies in die mark (besigheidsektor)	1	2	3	4
10.9 Leerders wat aan die einde van hulle tweede jaar uittree, bekik oor die nodige vaardighede om 'n geskikte posisie in die mark te vul	1	2	3	4
10.10 **Leerders** vind dit moeilik om tred te hou met die vinnige veranderings wat in die inligtingtegnologie-wêreld plaasvind	1	2	3	4
10.11 **Opvoeders** vind dit moeilik om tred te hou met die vinnige veranderings wat in die inligtingtegnologie-wêreld plaasvind	1	2	3	4

11. Reflekteer asseblief op die volgende stellings, wat aanduidings is van huidige realiteite en toekomstige doelwitte vir beide praktyk en beleide by u instansie, rakende die leerders se betrokkenheid by die leerproses, vir elke stelling deur van 'n skaal van 1 tot 4 gebruik te maak.

Die volgende 2 opskrifte verskyn in die tabel:

- **Praktyk** reflekteer wat is **tans in plek** in u klaskamers en instansie en waar sal u graag groei wil sien.
- **Beleid** verwys na wat u instansie **dink is tans belangrik en waar u dink daar is 'n behoefte vir meer beklemtoning in die toekoms.** Vir 'n stelliing om deel te wees van die huidige beleid, moet dit in een of ander beleidsdokument soos die missie stelling, kurrikulum raamwerk, organisatoriese plan, of 'n ander plan wat deur u instansie aanvaar is, verskyn.

INSTRUKSIES Voltooiing van die eerste 2 kolomme: Huidige realiteite

In die eerste twee kolomme teenoor elke stelling, rangeer u instansie se huidige leerderpraktyke en beleid in Inligtingstelsel klasse deur van die volgende skaal gebruik te maak:

Leerderbetrokkenheid tydens opleiding	Tegnologie Beleid
1 = Nie huidig in plek nie	1 = Nie in plek
2 = Sommige leerders en onderriggewers maak daarvan gebruik	2 = Nie so belangrik 3 = Redelik belangrik
3 = Baie leerder en onderriggewers het goeie vaardighede op hierdie gebied	4 = Baie belangrik
4 = Meeste onderriggewers het hierdie toepassing bemeester, dit is 'n groot bate vir die instansie	

INSTRUKSIES: Voltooiing van die laaste 2 kolomme: Toekomstige Doelwitte

Volgende, besluit hoè belangrik elk van hierdie stellings is vir **toekomstige doelwitte rakende die praktyk en beleid** by u instansie. Voltooi die 2 kolomme teenoor die stellings waar u dink instansies moet meer konsentreer op groei, hetsy in praktyk of in beleid.

Toekomstige Doelwitte vir **praktyk** en **beleid**

1 = nie 'n prioriteit vir verbetering op hierdie stadium nie / word nie oorweeg nie
2 = wil graag konsentreer op verbetering, maar lae prioriteit
3 = wil graag konsentreer op verbetering, medium prioriteit
4 = wil graag konsentreer op verbetering en hoë prioriteit

Stellings rakende leerderbetrokkenheid	Huidige Realiteite		Toekomstige Doelwitte	
	Praktyk	Beleid	Praktyk	Beleid
Visie van leer				
11.1 Leerders is betrokke in die daarstel van doelwitte, die keuse van take, die bepaling van assessering en standaarde vir die taak. Die geheelbeeld van leer moet altyd in gedagte gehou word.				
11.2 Die leerders is aktief besig om 'n verskeidenheid denk- / leerstrategieë te ontwikkel				
11.3 Gemotiveer deur leer - leerders is nie afhanklik van erkenning van ander nie – passie en entoesiasme vir leer bestaan				
11.4 Samewerking - Leerders ontwikkel nuwe idees en insig deur met ander te kommunikeer en saam te werk				

Stellings rakende leerderbetrokkenheid	Huidige Realiteite		Toekomstige Doelwitte	
	Praktyk	Beleid	Praktyk	Beleid
Take				
11.5 Betroubaar – take reflekteer op die werklike wêreld				
11.6 Uitdagend – moeilik genoeg om interessant te wees, maar nie totaal frustrerend nie				
11.7 Multidissiplinêr – het betrekking op die integrasie van dissiplines in die oplos van probleme en aangeleenthede				
Assessering				
11.8 Uitvoer gebaseer – vereis 'n uitvoering of demonstrasie, vir 'n werklike gehoor en 'n werklike doel				
11.9 Voortbrengend – Assessering het betekenis vir die leerder				
11.9 Kontinu en aaneen – Assessering is deel van instruksie en vice versa. Leerders Leer gedurende assessering				
11.11 *Regverdig* – assessering is regverdig vir alle kultuurgroepe				
Model van instruksie				
11.12 Interaktief – opvoeder/ tegnologie program is sensitief vir die behoeftes van die Gebruikers				
11.13 Voortbrengend – Instruksie is daarop gemik om betekenisvolle en sinvolle ervarings te skep				
Konteks waarbinne leer plaasvind				
11.14 Samewerkend – Instruksie konseptualiseer leerders as deel van die leergemeenskap				
11.15 Bou van kennis – leerervarings is so gestruktureer dat dit meervoudige perspektiewe meebring en probleme oplos op so 'n wyse dat elke perspektief bydra tot die gedeelde verstaanproses vir almal				
11.16 Empatie – leerder omgewings is so opgestel dat diversiteit, meervoudige perspektiewe en sterk punte na waarde geag word				
Groepe				
11.17 Heterogeen – Klein groepe van verskillende agtergronde en verskillende vlakke van vermoëns werk saam in 'n groep				
11.18 Regverdig – Klein groepe is sodanig georganiseer dat alle leerders oor 'n tydperk blootgestel word aan uitdagende take / ondervindings				
11.19 Buigbaar – Groepe is sodanig georganiseer dat elke leerder die geleentheid kry om saam met 'n ander groep leerders te werk vir verskillende onderrigdoelwitte				
Rol van die opvoeder				
11.20 Fasiliteerder – Betrokke in onderhandeling, stimulering en die monitor van besprekings en projekte, maar die fasiliteerder beheer nie die proses nie.				
11.21 Leiding – Help leerders om hulle eie betekenis / insig te vorm				
11.21 Mede-leerder/ mede-ondersoekbeampte – Die opvoeder beskou sy/homself as 'n leerder en is gewillig om risikos te neem en areas buite sy veld van ekspertise te ondersoek				
Rol van die leerder				
11.22 Verkenner – leerders kan nuwe idees/ gereedskap uitprobeer – ontvang leiding oor hoe om navorsing te doen				
11.24 Kognitiewe leerder – is in verwantskap met 'n mentor wat die leerder afrig om nuwe idees te ontwikkel en vaardighede aan te leer wat die rol van 'n professionele persoon simuleer				
11.25 Opvoeder – leerders word aangemoedig om andere te leer binne 'n formele sowel as 'n informele konteks				
11.26 Produsent – leerders ontwikkel produkte wat van werklike nut is vir hulle of vir ander				