

ICT Platform for WIL (Workplace-based Placement)

Alternatives as part of pilot project at the NWU

Project Leader: Prof Carisma Nel

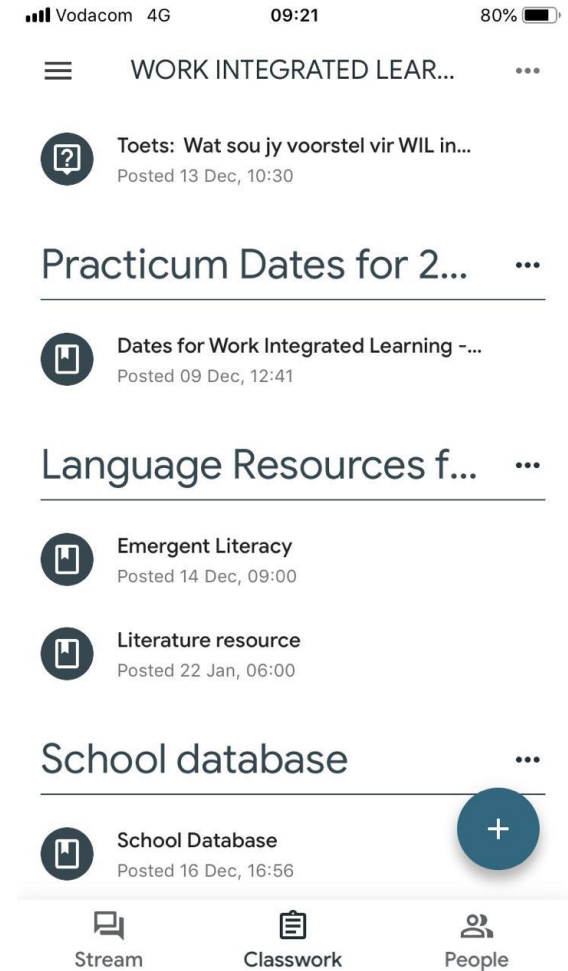
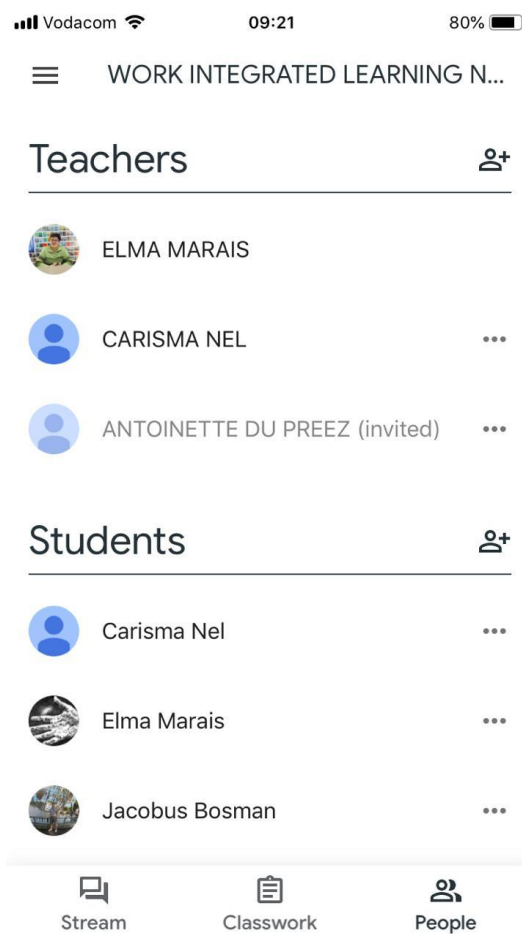
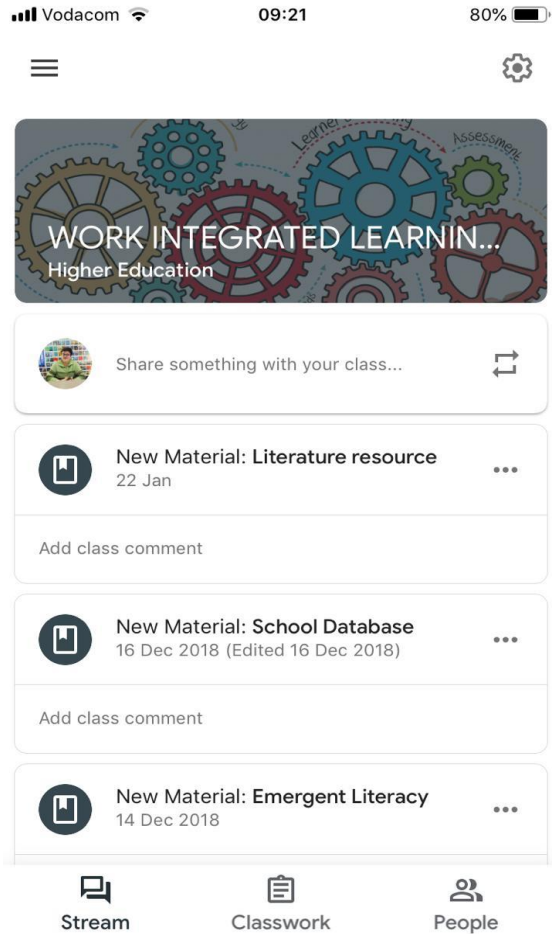


**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



Google Classroom



Introduction

“The Internet is changing the very nature of society in ways unparalleled since the industrial revolution. The Internet is affecting local, national and global economies and their infrastructures. Information is available at any time from any place to any Internet user. This is creating tremendous opportunities for universities to provide a learning environment that is accessible to all” (Aggarwal, 2000, p. 2). Learning outcomes are impacted by teaching methods and introducing technology use into learning environments will involve changes in educational practice (Twining, 2002). The new digital learning environment has been compared to an ecosystem where learning flourishes (Tucker, 2014).

Google Apps for Education (GAFE) is a suite of cloud-based integrated communication and productivity applications and Google is offering this software platform to educational institutions free of cost. The GAFE product line is also touted as the solution for academic institution’s need for a unified digital technology platform to support the modern classroom. Not only does this product offer platform independent access to the integrated applications but also allows users unlimited digital storage space. GAFE has the potential to substantially lower the cost of technology expenditures for educational institutions, and investments in the adoption of GAFE can result in greater returns.

The conceptual areas of infrastructure, learning, teaching, leadership, and assessment have been identified as the core elements to focus on in executing an educational technology plan .

Infrastructure

The benefits GAFE adoption offers for infrastructure are substantial and for a university, most of the savings are achieved as a recapture of all the costs of purchasing physical computing systems and software. Along with the free outsourcing of a large amount of the physical hardware that is required for a robust twenty first century learning environment, the human resource costs for maintaining that system are also eliminated, as well as all costs for developing and upgrading the core product in the future. The infrastructure also consists of the software that runs on user’s devices, and the software is the area where most of the benefits of the GAFE product will be realized. Utilizing and developing advanced custom learning software will require the most effort and commitment for universities to leverage Google’s programming environment to achieve maximum rewards.

Learning

The academic learning environment that the GAFE product can help standardize is based on principles derived from the learning sciences. Using the flexibility and power of GAFE technology, academic institutions can create an accessible learning ecosystem to engage the global learning community. Every university has a major role in researching the effectiveness of teaching practices using technology, so it can design the best online teaching resources that support the learning process for their students.

Google Classroom

Google's learning and teaching management application, serves as an administrative dashboard for the digital learning environment. The top benefits for using Google's Classroom are its easy setup to share information in the class stream, simple assignment management, automatic filing of materials in Google Drive, and enhanced communication, integrated with all GAFE applications (Google, 2016a). The Chrome extension "Share to Classroom" allows the creation of interactive content that is pushed to the learner's device. The Google Classroom share button provides a seamless way for teachers and students to exchange digital classroom materials. Apps integration allows educators to access third-party add-ons. Chrome Web Store also has many applications and extensions that support learning objectives (Google, 2016b).

Accessing the integrated GAFE developers environment will aid in creating a digital learning management system and classroom dashboard for teachers to utilize in assessing and assisting student performance. Researchers have access to a cloud based programming architecture that supports responsive application design, custom programming, and data storage.

Teaching

Using the GAFE product in teaching methods increases both the educator's and student's competency in using twenty first century technology. Utilizing the GAFE product allows educators opportunities to engage with their learners anywhere anytime and provide the on-line resources that are specifically designed with research to improve learning outcomes.

Leadership

Leadership is needed to establish the environment and conditions for change. Leaders also foster a culture that encourages innovation and experimentation. Leadership must bring all stakeholder groups to the table to create a vision for technology use in the learning environment that best supports the interests of all parties. Academic leaders recognize the importance of having an influential academic voice on the Internet for mediating the process of human advancement in a digitally connected world. Leadership encourages the growth of the academic digital learning community and advocates for a scholastic environment, where controversial debates are best resolved and cultural advancement promoted.

Assessment

Assessment begins with establishing the safety and protection of information in the learning environment. Leveraging GAFE products for assessment translates to information gathering and access rights to monitor specific student activities that relate to the learning process to assist faculty improve their teaching practice. This assessment strategy objective is to aid in implementing teacher interventions in support of individual student learning needs. The specific learning activities that relate to GAFE technology proficiency and twenty first century skills in general, need more exploration by the learning sciences to develop new educational objectives and performance assessments that measure what is important. Along with developing useful student performance assessments tools for teachers, assessments are used for continuous improvement of the learning system and refining teaching methods. The challenge is to develop teaching methods that engage learners and supports learning behavior while measuring the progression of competencies needed for mastering complex skills.

Leveraging Digital Communication

The tools and resources needed by contemporary information technology personnel to perform the collaborative effort of supporting universities information technology systems, are similar to the tools and resources needed by modern students to communicate, collaborate and interact with their peers and the digital learning community. Improving communication supports better outcomes in both corporate and learning environments. GAFE applications have similar functionality as many of the competing communication and productivity software products. The learning environment is a student's connection to academic partners who share similar passions. It becomes valuable to a student if teachers design curriculums that utilize the GAFE products to develop productivity skills and most importantly to engage the digital learning environment, so students have the opportunity to digitally connect with their classmates and the larger learning community. This opportunity also encourages a student to participate in the public space of the Internet, in a way that represents appropriate academic use. Teachers have a role in developing a student's academic digital portfolio of resources as part of the learning process. Teachers validate student contributions to the educational process and assist in improving the quality and promoting academic communication.

ICT Platform for WIL (Coursework Component)

eFundi View Site As Sites CARISMA

Portfolio Register for Schools WIL Practicum Dates Placement list Practicum Leaders Info WIL Code of Conduct Plagiarism Announcements Resources Assignments Tests & Quizzes Markbook Chat Room Statistics Site Info Help

Welcome Edit Link Help

WIL
Work Integrated Learning

**FACULTY OF EDUCATION / FAKULTEIT
OPVOEDKUNDE**

WIL-OFFICE / WIL KANTOOR POTCHEFSTROOM CAMPUS

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Recent Announcements Link Help

Options

Announcements
(viewing announcements from the last 10 days)

There are currently no announcements at this location.

Recent Chat Messages Link Help

Options

Simulated Teaching Practice: Implementation Requirements

Rationale for choice of core teaching practice: Providing explanations

In terms of teachers' professional knowledge, three main types have been identified in literature review: Pedagogical Knowledge (PK), Content Knowledge (CK) and Pedagogical Content Knowledge (PCK). PK refers to teachers' knowledge about teaching practice that may enhance learning. CK is the teachers' knowledge about the topic being taught (Sevian & Gonsalves, 2008). The term PCK was introduced by Shulman (1986), referring to the special amalgam of **content knowledge transformed by the teacher into a form that makes it understandable**, hence its importance to teach well any subject (Appleton, 2006). For Shulman (1986), PCK includes analogies, illustrations, examples, explanations and demonstrations to reformulate the subject knowledge and make it understandable to the students. Treagust and Harrison (1999, p. 40) asserted that "without a repertoire of pedagogical content knowledge to recognize how the content can be explained appropriately to less informed people, teachers will be less equipped to do their work effectively". According to Geelan (2012), the field of research about teacher explanations must be developed, seeking to improve the quality of the explanations given by teachers. Similarly, Sampson and Clark (2007) mentioned that teacher explanations could serve as models for learners, as they may learn to explain and also to argue about their own scientific ideas from teacher's explanations.

- How does the student teacher transform subject matter into a form that learners can comprehend?
- When the beginning teacher confronts flawed or muddled content in textbook chapters or confused learners, how does the teacher generate new explanations, representations or clarifications?
- What are the sources for analogies, metaphors, examples and demonstrations? (Shulman, 1987).

Academic, Technical, Partnership and Administrative Quality Control Measures

Academic

- Moderation of simulated teaching practice experiences – (Academic WIL Coordinators)

Potchefstroom

- ✓ Dr. Carolina Botha (Intermediate Phase, Senior and FET Phase and PGCE)
- ✓ Prof Carisma Nel (Foundation Phase)

Mahikeng

- ✓ Mr Alvino Comole (Intermediate and Senior and FET Phase)
- ✓ ? (Foundation Phase)

Vaal

- ✓ Mr Eddie Kok (Intermediate and Senior and FET Phase)
- ✓ Dr. Rachel Mayimele (Foundation Phase)
- Academic control and sign off on subject-specific quality (Subject Chairpersons)
- Simulated Teaching Practice Requirements
 - Student teachers must complete:
 - ✓ A one-page (maximum) summary of what they understand about the topic to be taught (include extract from CAPS).
 - ✓ TWO lessons on different topics
 - ✓ A one-page (maximum) reflection on the simulated teaching practice experience (focus on the core teaching practice of explaining content)
- Core teaching practice will be explaining/modelling content.
- Topics (i.e., subject content) will be provided to university subject mentors
- Suggested rubric to be considered for use by university subject mentors (only minor adaptations will be allowed – subject chairperson only) for final summative assessment.

Simulated Teaching Practice Learning Cycle Requirements



Rubric for assessment of simulated teaching practice experience

Criteria	1-2	3-4	5-6
Summary and Interpretation of Content			
Appropriateness of content summary	Summary indicates a significant gap in understanding, although an attempt was made. Unelaborated with several errors present	Summary indicates that there are a few errors, but it does not deter from accuracy and/or meaning. Focussed, effective and relevant.	Summary indicates consistent and thorough understanding. Elaborate, relevant and insightful.
Simulated Content Explanation			
Clarity	The explanation is confusing, vague or tautological	The teacher explains the concept, and then gives it a name or definition OR The explanatory language is understandable for the learners	The teacher explains the concept, and then gives it a name or definition AND The explanatory language is understandable for the learners
Coherence and cohesion	There is no coherence or cohesion	Each part of the explanation shows a relation (i.e. cause, consequence, inclusion, exclusion, differentiation, similarity) with the following part OR The explanation presents strong cohesive elements	Each part of the explanation shows a relation (i.e. cause, consequence, inclusion, exclusion, differentiation, similarity) with the following part AND The explanation presents strong cohesive elements
Sequence	There is no sequence	The teacher explains the concept in a progressive sequence	The teacher explains the concept in a progressive sequence

		OR	AND
		The main ideas presented scaffold the concept construction	The main ideas presented scaffold the concept construction
Accuracy	The teacher explains the concept with inaccuracies that may lead to a conceptual error OR The explanation contains a conceptual error	The teacher explains the concept with some inaccuracies that make the concept vague, but it does not imply a conceptual error	The teacher explains the concept without any conceptual errors or with some generalisations necessary for learning
Sufficiency	The explanation presents mainly aspects that do not contribute to the concept construction	The explanation presents some aspects that contribute to the concept construction	The explanation presents the main aspects that contribute to the concept construction
Connection with learners' experience	There is no connection with learners' experience	The teacher identifies students' prior ideas/knowledge or mentions learners' everyday life aspects related to the concept without connecting it explicitly with the explanation (i.e. integrating it, confronting it, etc.)	The teacher identifies students' prior ideas/knowledge or mentions learners' everyday life aspects related to the concept AND Connects it explicitly with the explanation (i.e. integrating it, confronting it, etc.)
Metaphor, analogy, simulation or model usage	The teacher does not use a metaphor, analogy, simulation or model to explain	The teacher uses a metaphor, analogy, simulation or model to explain without mentioning the concept features that are present in the metaphor, analogy, simulation or model	The teacher uses a metaphor, analogy, simulation or model to explain AND mentions the concept features that are present in the metaphor, analogy, simulation or model
Example, demonstration, experiment,	The teacher does not use an example, demonstration, graphic or image to complement the explanation	The teacher uses an example, demonstration, graphic or image to complement the explanation	The teacher uses an example, demonstration, graphic or image to complement the explanation

graphic or image usage		BUT The teacher does not illustrate, clarify or highlight a concept feature through it	AND The teacher illustrates, clarifies or highlights a concept feature through it
Gesture and voice usage	There is no use of gesture and voice usage	The teacher uses gestures appropriately to complement the explanation OR The teacher uses voice to highlight some aspects of the explanation	The teacher uses gestures appropriately to complement the explanation AND The teacher uses voice to highlight some aspects of the explanation
Misconception illustration	The teacher does not mention any common misconception in the understanding of the concept	The teacher mentions a common misconception in the understanding of the concept without mentioning how learners can avoid it.	The teacher mentions a common misconception in the understanding of the concept AND Mentions how learners can avoid it.
Organisation of PowerPoint	It is difficult to follow the presentation because there is little logical sequence/flow to the information. Some slides do not support the theme of the presentation	The information is mostly presented in a logical sequence. The theme of the presentation is clear and supported by most of the included slides.	The information is organised in a logical, interesting sequence. The theme of the presentation is consistently clear and supported by all the slides.
Screen design	The design is a) busy/ cluttered or b) barren/stark. Some design elements are incorporated such as backgrounds, graphics, fonts and font sizes, typesets, colour schemes, labelling, headings, formatting and animation. Includes a distracting amount of	The design is eye catching, “clean”, visually pleasing, and uncluttered. Thought has gone into selecting appropriate design element to enhance the content. Includes a variety of graphics, sound effects, text and animation. Adequate navigational tools and buttons. An effort was made to explore and incorporate most of the appropriate features offered by the design	The design is professional, aesthetically pleasing and highly functional. Harmonious and effective use of design elements. Includes a balanced variety of graphics, sound effects, text and animation. Creative use of navigational tools and buttons. An in-depth effort to explore and incorporate most of the appropriate features offered by the design software. All slides transition smoothly.

	graphics, sound effects, text and animation. Some buttons and navigational tools. Limited effort to explore and effectively incorporate the features offered by design software. Very few transitions are used and/or they distract from the presentation.	software. Smooth transitions are used on most slides.	
Reflection on simulated teaching experience			
Depth of reflection	Response demonstrates a lack of reflection on, or personalization of the experience. Viewpoints and interpretations are missing, inappropriate, and/or unsupported. Examples, when applicable, are not provided.	Response demonstrates a minimal reflection on, and personalization of the experience. Viewpoints and interpretations are unsupported or supported with flawed arguments. Examples, when applicable, are not provided or are irrelevant to the experience.	Response demonstrates a general reflection on, and personalization of the experience. Viewpoints and interpretations are supported. Appropriate examples are provided, as applicable.
General			
Overall presentation and participation	Most of the expected elements are included; the quality of written, visual and/or digital presentation does not meet university standards with too many errors in spelling, grammar and punctuation	The artifact is well organized with all critical elements included; the quality of written, visual and/or digital the presentation is <i>competent</i> with minor errors in spelling, grammar and punctuation.	The artifact is well organized with all critical elements included; learning is well- documented with writing and production skills that <i>exceed</i> those of most university students

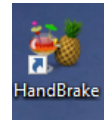
Receptive to feedback	Does not accept and act upon constructive feedback from lecturer and mentor teacher	Accepts and acts upon some of the constructive feedback from lecturer and mentor teacher.	Accepts and diligently acts upon all constructive feedback from lecturer and mentor teacher.
Total	100 (96+4 bonus)		

Component Description

Component	Description
Clarity	Proper use of explanatory language
Coherence and consistency	Connection between different parts that configures the explanation as a coherent unit
Organisation	Structural progression of explanation
Conceptual precision	Adherence to scientific models and theories
Completeness	Explanation's sufficiency in terms of teaching objectives
Connection with learners' ideas	Link between explanation and learners' prior ideas or experiences
Use of analogies, metaphors, simulations, experiments or models	Proper application of tools to help learners interpret the concept
Use of examples, images or graphics	Proper application of tools to help learners interpret the concept
Use of non-verbal language	Gestures to represent concept, intonation or inflections in voice
Treatment of learner errors as learning opportunities	Usage of errors in understanding of concepts as source of inquiry, opportunity for learning and/or assessment

Technical

- Student teachers must all receive technical training.
- If required, lecturers may also receive technical training.
- Lecturers to decide how they will “communicate and conduct” the simulated teaching practice (e.g., Newly created eFundi site for uploading of artifacts; Email, Google Drive, etc.)
- All videos must be between 4 and 9 minutes in length.
- PowerPoint with voice-overs is the preferred format.
- Files should be saved in mp4 format
- Files should be compressed to ensure that they do not exceed 30mb (Use Handbrake).



- Upon completion of the simulated teaching practice experience all lecturers will be required to upload their artifacts to a Google drive folder for each lecturer – this is for moderation purposes. Lecturers will have three weeks to comply.

Partnership

- No student teacher should directly correspond with the mentor teacher. All communication to the mentor teacher is done via the lecturer.
- Lecturer and mentor teacher to liaise and determine how they will communicate and assist the student teacher (e.g., email, WhatsApp, etc.)
- School and mentor teachers should be required to “sign off” on student teacher participation.

Administrative

- Directors to liaise with subject chairpersons to identify lecturers.
- One subject specialist to be allocated a total number of 20 student teachers.
- WIL office to identify schools that will participate, and send documents outlining requirements.
- WIL office to assist to link lecturers with 20 student teachers.
- WIL office to liaise with schools and mentor teachers – cooperation and contact details.
- WIL office to provide lecturers with contact details of mentor teachers they will be working with.
- WIL office to “place” lecturers and their student teacher cohort at a school and with a mentor teacher(s)
- WIL office to arrange format of final “sign off” by school and mentor teacher(s)

Work Integrate... X

- My Courses
- Course home
- Settings
- Gradebook
- Student view
- Notifications
- Notes
- Add to my calendar

Readings

Library

- 95% Group Reading Lesson
- The Science of Reading: An Overview (by Dr. Jan Hasbrouck)
- Equipped for Reading Suc...
- WhatsApp Video 2020-0...

Assignments

Show previous assignments...

Chats

Groups

- Announcements
- General discussion

One-on-One

Hashtags

- #grades
- #lecture
- #logistics
- #section

- Get started
- Library
- Assignments
- Students

+ Add

+ Add content

- 95% Group Reading Lesson
- The Science of Reading: An Overview (by Dr. Jan Hasbrouck)
- Equipped for Reading Success
- WhatsApp Video 2020-09-09 at 09:58:08

Folder

Add folders to your course to organize content in the library. Folders can be individually hidden from student view if you do not want students to see them, or want certain content only accessible through an assignment.

Textbook

Select a book from 200,000+ titles in our catalog. Students simply purchase the book through Perusall, usually at the normal digital price.

Web page

Take a snapshot of a web page to add to your content library.

Documents from Dropbox

Select a PDF, EPUB, or Word document from your Dropbox to add to your content library.

Documents from my computer

Upload a PDF, EPUB, or Word document directly from your computer to your content library.

Materials from another course

Copy course materials from another course into this one.

Video **New**

Add a video from YouTube, Vimeo, Dropbox, Google Drive, or a direct link to a video file.

iClicker **New**

Allow students to purchase iClicker Reef at a discount. (Purchasing iClicker through Perusall is only available for students in the US and Canada.)

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