Writing to Learn:
in-class writing activities

Introduction to Writing to Learn: in-class writing activities.

There is strong research to suggest that active learning leads to deeper learning and improved retention of that which is learned. Equally, there is a firm research basis for the effectiveness of writing as a form of enquiry and a beneficial learning tool. In this manner, writing can be used as a thinking and a communication tool; writing can help us to work out what it is we want to say as well as being a means through which we can articulate our ideas.

In-class writing combines active learning with writing to learn. Short writing exercises used in class can help to reinforce learning and to spark ideas, as well as helping students to work out what it is they are trying to understand and/or say. In-class writing activities can bring variety to a classroom and can promote good writing processes. They can also be used to springboard discussion and to prompt questions. They can be private or public. Often, students do not share this informal writing but occasionally, where appropriate and highlighted in advance of the writing, students might discuss the ideas that they wrote about with others either in pairs or small groups; alternatively, they might read their work to each other or to the whole class.

We recommend that when a teacher/facilitator asks a group to write in class, that the teacher/facilitator also completes the writing assignment with the group. We believe this is modelling good practice.

With some of these activities, particularly the ones that help teachers to assess learning, it may be appropriate to collect the writing. If and when this is going to happen, students should be told in advance that the lecturer will take up the work. Generally, these pieces of writing can be anonymous.

All of the following writing activities can be completed individually; many could also be done in pairs or in small groups for different purposes.

This short booklet is made up of two parts. Part One is a list of very brief descriptions of in-class writing activities. It also includes some greater detail on freewriting and further advice on teaching with informal writing; both of these inputs are taken verbatim from the University of Minnesota's Centre for Writing website. Part Two contains one page descriptions of in-class writing activities. These plans may be useful for colleagues who are starting out with in-class writing; many of these are drawn from the excellent Angelo and Cross (1993,1998) text *Classroom Assessment Techniques*. We have finished the booklet with a very limited list of publications/websites which describe in greater detail some of the in-class writing ideas and/or include information on longer in-class writing assignments.

Feedback on how you have used this booklet or these activities is very welcome; please email us on writingcentre@nuim.ie with your comments.

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May 2017

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Part One: List of Ideas

Freewriting

Freewriting is writing for a given amount of time, usually for no public audience, in full sentences (not bullet points), in an informal manner, without stopping. The facilitator keeps time which is usually short, e.g. five minutes, and writes with the group. Freewriting is a good warm up and brainstorming technique. It is often used with a prompt which can be an incomplete statement or a question. One prompt which we use in writing groups when we are trying to explore writing processes is:

'When I have a piece of writing to do for college the first thing I do is …'

Further information about freewriting is included at the end of this document.

Connotations

The facilitator suggests a word and asks students to write any connotations of that word that come to mind. The exercise could be phrased as follows:

Write down any words that come to mind when you think of 'counter culture'; when you think of 'management'; when you think of 'climate change'; when you think of 'poverty', etc.

Write the Picture

The facilitator asks students to think of an image that communicates an idea for them, for example, what image communicates effective leadership to you? It might be a conductor, a football coach, a school principal, a team captain, etc. The facilitator then asks students to write about that image or person in as much detail as they can and to explain how the image represents the idea.

Metaphors

The facilitator asks students to describe an idea or topic by finishing this phrase:

'GDP is like …'
'Child-centred schools are like …'

Students might just finish the sentence or they might freewrite for a couple of minutes using the start of the sentence as a prompt.

List and Prioritise

Students could be asked to list or brainstorm their current concerns about a topic from the trivial to the very serious. When they have listed their concerns they are asked to review

them and prioritise by answering the following question in writing: what are my top three concerns and why do they matter?

Keywords

Students are asked to suggest keywords from a piece of in-class reading. Alternatively, students might build a short piece of text from a given list of keywords.

Tweet

Students write a tweet about any idea being discussed in class. They need to follow the conventions of tweeting, including the limitation on number of characters. The Tweets could be shared (or not) with the class.

Write an Abstract

Abstracts are typically written at the end of writing projects. However, drafting an abstract at the start of a writing project helps to hone one's thinking about the purpose of the project. Students could be asked to write the abstract for a writing assignment that they have or a project they are going to do before they start and at intervals during the project. These abstracts could be as short as 100 words for this exercise.

Write a Dialogue

Students are asked to write a dialogue about a course related topic. Students would be given the first few lines of the dialogue and the characters involved, for example, 'Write a dialogue between you and an older person (perhaps your grandmother) about escape attempts from internment camps in World War II. Begin with the following two lines':

> Grandmother: 'What's this you were saying about the British trying to get out of France? What was it?'
> Student: 'Well it was complicated. The British mostly wanted to get home but it wasn't easy.'
> Grandmother: 'Why not?'

Read and React

Present a scenario, dilemma or case study to students and ask them to write about what they would do if they faced this situation. This writing may be quite reflective in style.

Process Analysis

Students describe, in their own words, the chronological sequence of steps that explain how something is done, how something happens or how a conclusion is reached. They should write as though they are providing instructions; this writing is often quite technical in nature.

Blue-Sky Writing

Students are asked to write about the blue-sky or perfect version of something, e.g. the perfect solution to homelessness, the perfect school/university, the ideal organisation, etc.

'Mind the GAPS'

Students are asked to consider a writing assignment that they have in terms of its GAPS, i.e. what is the **G**enre? Who is the **A**udience? What is the **P**urpose? What is the **S**tance – where are you coming from, what is your case/argument? Students could do the same in reaction to a piece of writing/reading.

Admit Slips

Student write for a couple of minutes 'admitting' something that they don't understand and explaining why they have trouble with it.

Annotations

'(An) annotation typically asks students to note key ideas and briefly evaluate strengths and weaknesses in an article. In particular, annotations often ask students to note the purpose and scope of a reading and to relate the reading to a particular course project.
You can have students annotate (and eventually compare) readings assigned for the class, or you can ask students to compile annotations to supplement the course readings. Each student's annotations can be distributed to the class in one handout or through electronic media (Web forum, e mail).' ('Annotations' n.d.)

Glossary of Terms

Students are asked to write dictionary type definitions.

Ladybird Version

Students are asked to write a very simple but accurate explanation of something, as though they were going to teach it to a class pupils aged 7-8 years.

Responding to a Text

Students are asked to mark up a text with questions that they have for the writer.

MCQ Writing

During or indeed at the end of a class, students are asked to write one Multiple Choice Question (MCQ) on the content of the class. Teachers can collect these and use the good ones to begin the next session with the group.

Problem Solving

Present a real life problem/dilemma to students (from a newspaper, for example) and ask them to write a solution. This is informal writing. After presenting the problem to the

group the student could be given a role and asked to suggest a solution, e.g. 'If you were the Minister for Education and you were faced with this problem, what would you do?'

Problematizing

'After you introduce a new concept in your course, ask students to write out a theoretical or practical problem that the concept might help to solve.' ('The Problem Statement' n.d.)

Explain a Graph

Students are asked to translate a graph into a short piece of text.

Blog and Reply

Students are asked to read a blog post and to write a short reply in the same style.

Proofreading

Students are asked to proofread a piece of text. Guidelines should be provided to students on what to look for in the text.

Text Completion

Students are asked to complete a piece of text. The piece could be either given as a hand out or posted as part of a PowerPoint presentation. For example, students could be asked to add 5 or 6 lines to this piece of text:

> 'IN THE 20th century the planet's population doubled twice. It will not double even once in the current century, because birth rates in much of the world have declined steeply. But the number of people over 65 is set to double within just 25 years. This shift in the structure of the population is not as momentous as the expansion that came before. But it is more than enough to reshape the world economy.' ('Age Invaders' n.d.)

> 'The doubling of the population will have many implications. In the first instance …'

What Counts as Facts

'Select two or more treatments of the same issue, problem or research. For example, you might bring in an article on a new diet drug from *USA Today, The Wall Street Journal,* and the *Journal of Dietetics*. Ask students to write about what constitutes proof or facts in each article and explain why the articles draw on different kinds of evidence, as well as the amount of evidence that supports stated conclusions.' ('What Counts as a Fact?' n.d.)

Letters to Authors

Students are asked to write a personal response to an assigned reading in the form of a letter or email. The writing should be informal in tone.

Cubing Topics

Students are given a topic which they approach from six sides:
1. describe it
2. compare it
3. associate it with something else they know
4. analyse it, i.e. break it into parts
5. apply it to a situation
6. argue for or against it

This could result in a long writing exercise, so you might just ask students to do some of the elements.

Journalistic Questions

Students are asked to consider the who, what, where, how, when, how and why of a topic.

Rewriting

Students are asked to rewrite or correct a short woolly piece of text in order to make it clearer and more accurate.

The Believing Game and the Doubting Game

'First espoused by Peter Elbow, this writing activity simply calls for students to write briefly

- first, in support of an idea, concept, methodology, thesis;
- second, in opposition to it'. ('The Believing Game and the Doubting Game' n.d.)

This exercise can be very short; it might only involve two or three lines in support and in opposition. Alternatively, half the class could write in support and half in opposition and the contributions shared in a Google document or through live chat on an online learning platform.

Limericks

A limerick is short verse with a particular rhyme scheme and rhythm. Here is an example:

'There once was a milkmaid named Mabel,
Who at milking was not very able.
So to get the thing right,
She would practise each night,
With sausages under the table.

Students are asked to write a limerick about a course related idea. They may wish to share these.

Freewriting: Greater Detail

'Freewriting, a form of automatic writing or brainstorming trumpeted by writing theorist Peter Elbow, requires students to outrun their editorial anxieties by writing without stopping to edit, daydream, or even ponder. In this technique, all associated ideas are allowed space on the page as soon as they occur in the mind. Five-minute bouts of freewriting can be useful before class to spark discussion; in the middle of class to reinvigorate, recapitulate, or question; and at the end of class to summarize. It is also useful at many points in the drafting process: during the invention stage as students sift for topics, and during the drafting process as they work to develop, position, or deepen their own ideas.

There are at least two types of freewriting assignments: focused and unfocused. Focused freewrites allow students opportunities to initiate or develop their thinking on a topical, instructor-supplied prompt, for example, "What is a virus?" Unfocused freewrites, on the other hand, allow students to simply clear their minds and prepare for content activity. In either form, students are instructed to write generic phrases like "I can't think of anything to say, I can't think of…" or "Nothing nothing nothing" if their minds go blank. Once their self-consciousness or resistance lowers, ideas will begin to flow again.

It's important, particularly in the case of focused freewrites, that students take a few moments after the timer has gone off to read over what they've written, highlighting useful and interesting ideas that may be glittering from amidst the verbal rubble […]. These insights might then be developed into formal writing assignments, or at least be contributed to discussions.

Note also that freewriting is often personal and messy. It should be a low-stakes writing activity for students, and should therefore remain ungraded.'

(Flash n.d., a)

Teaching with Informal Writing Assignments: Some Notes on Procedure

- When introducing the activity, give students your rationale for assigning it. Avoid characterizing it as a 'fun little writing activity.'
- If you're using a prompt, present it both orally and visually by writing it on the board or projecting it on the screen. Exceptions include disciplines where response to oral instructions is valued.
- Whenever possible, do the activity yourself before presenting it to students and/or do it along with them in the class. This makes a significant impact on student motivation.
- Before students write, describe next steps. Will the writing be collected? discussed? included in an assignment portfolio? graded? If students are going to be able to be truly informal, they need to know that they aren't going to be judged on the quality of their exploratory writing.
- Be clear about time limits ('I'll stop you in 5 minutes') and when time is almost over, give a one-minute or 30-second warning.
- At the completion of the assignment, ask students to reflect on insights and developments.
- If you collect student writing, summarize, or at least highlight and comment on your findings during a subsequent class.

Effective Write-to-Learn Assignments...
- Are short (3-15 minutes)
- Ask students to write a word, a sentence, question, or a paragraph or two
- Are integrated (explicitly) into class content, objectives, and activity, and, are optimally, utilized in subsequent writing projects
- Elicit multiple responses
- Where appropriate, receive some content-focused (versus mechanics-focused) response
- Aren't formally graded, but [could] count toward a portion of the grade

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Now What?: Responding to Informal Writing

If the primary purpose of informal writing is learning (rather than communicating what has been learned) and if the intended audience is usually limited to the writer, how are instructors advised to grade or respond to the writing generated by these activities? Unlike finished student work elicited by more formal assignments, informal writing is not assessed for style or grammar; you've asked students to formulate and pursue ideas in a creative and potentially messy process. With this in mind, consider the following strategies for working with completed informal assignments:

For In-Class Short-Writes:

- Do nothing more: continue with the discussion, demonstration, or lecture, confident that the activity succeeded in allowing students to deepen their understanding of the target content.

- Follow the activity by giving students class time to voice ideas and/or questions they may have uncovered by writing. In large classes, ask students to discuss ideas from their writing with a peer in order to share or synthesize responses that you then pull into discussion.
- Collect the writing with or without student names. You can read them quickly for your own information, and then summarize this information in the next class session, or you can grade them (check, check minus, check plus).
- Ask students to keep their writing until the semester's end, then hand in their five best for grading.

Grading Informal Writing Assignments:
Respond with a simple check plus (excellent), check (satisfactory), or check minus (sub-adequate) and, if time is limited, minimal comments:

✓+	'Your insights on issues relating to privacy in health care reporting are strong and could be developed into a compelling argument!'
✓	'You've named some of the most important issues involved with privacy and health care, but don't develop any of them persuasively.'
✓−	'You've summarized the articles and have responded thoughtfully, but don't answer the assigned question.'

(Flash n.d., b)

Part Two: One Page In-Class Writing Plans

Stop Start Continue

Aim of Activity

To get quick feedback from students

Prep time	In-class time	Follow-up time	Class size	Risk
None	2-3 mins	Approx 2 mins per 20 students	Any	Low

Materials, Tools, Resources

- Pieces of paper/post-its

Planning the Activity: Steps

- Reserve three minutes at the end of class for the activity.

Implementing the Activity: Steps

- Ask all students to write on a piece of paper what they would like you to start, stop and continue in terms of your teaching of a particular topic.
- Give students two minutes to write.
- Ask students to leave the pieces of paper at the front/back of the room on their way out.
- Review what the students have written.

Variations / Extension Activities

- Summarise the students' comments and tell the students about the comments you received and what you plan to do about them.
- Try this more than once in the semester – twice or at the beginning, middle and end of semester.

Comments

- Very quick easy way to find out what students think about your teaching of a topic.

(Rapidbi 2016)

Punctuated Lecture

Aim of Activity

To focus students on how and what they are learning within a session.

Prep time	In-class time	Follow-up time	Class size	Risk
5 mins	3-6 mins	15-30mins	Any	Low - Medium

Materials, Tools, Resources

- Questions pre-prepared.

Planning the Activity: Steps

- Choose a lecture/session where you are introducing new/complex material.
- Decide on the questions and when to stop/'punctuate' the session.

Implementing the Activity: Steps

- Stop the lecture and ask students to consider the following questions; e.g. what were you doing to record the information you were receiving? How successful were you? What were you doing to make connections between the 'new' information and what you already have? What did you expect to come next in the lecture and why? (2 mins)
- Ask students to write down their responses (2-3 mins).
- Repeat at another appropriate interval.
- Collect students' responses and review.

Variations / Extension Activities

- Ask students to review their responses and note them, and then compare them as they work through the module.
- Share responses of interest – useful techniques; examples of self-analysis.

Comments

- Provides a valuable insight into how students learn – gets them thinking about how they learn; promotes active listening and reflective learning skills and focuses students' attention.
- Students may not be familiar with reflecting on how they learn (metacognition) so you may need to prompt them with vocabulary.

(Angelo and Cross 1993, pp. 303-306)

The Minute Paper (also known as 'The One Minute Paper')

Aim of Activity

To prompt students to note the most significant learning points and the questions which remain after a session.

Prep time	In-class time	Follow-up time	Class size	Risk
5 mins	1 min	15-30mins	Any	Low

Materials, Tools, Resources

- Can have pre-prepared sheets for students with questions noted – or ask. students to use own paper and hand up.

Planning the Activity: Steps

- Decide on what you want to focus on – students' understanding of the lecture, or prior homework assignment.
- Decide on the questions – see sample, e.g.: 'What was the most important thing you learned during this session?' and 'What important question remains unanswered?' or 'Identify the three most important points'.
- Pre-prepare sheets for students – if time / paper or at least on board, PowerPoint or overhead projector.

Implementing the Activity: Steps

- Set aside five minutes to use this technique.
- Show questions on screen and handout out sheets or ask students to use own paper.
- Allow students one to three minutes to complete questions.
- Give instructions re. the format you want: words, sentences, etc.
- Collect sheets and review to inform next lecture.
- Give student indication of responses – range and samples as appropriate.

Variations / Extension Activities

- Allow time for students to discuss their responses with peers nearby – or students complete them in small groups.

Comments

- Quick and easy to prepare and implement and will give really valuable feedback on what students are learning.
- Can be useful to use this at intervals – beginning of a module (to gauge prior knowledge), mid-way and towards end.

(Angelo and Cross 1993, pp. 148-53)

Muddiest Point

Aim of Activity

To understand what students find least clear or most confusing about a topic.

Prep time	In-class time	Follow-up time	Class size	Risk
5 mins	4-6 mins	Approx 2 mins per 15 students	Any	Low

Materials, Tools, Resources

- Muddy point cards / pieces of paper

Planning the Activity: Steps

- Determine what you want feedback on, e.g. the entire lecture? One topic?
- Prepare muddy point question slide/acetate/cards or write on blackboard, e.g. what questions do you still have about what was covered today? What was the muddiest point in today's lecture? What are the muddiest points in the Xsection?
- Print & prepare muddy point cards/paper if applicable.

Implementing the Activity: Steps

- Schedule time at the end of the lecture for exercise.
- Write the muddy point question on the board or display your prepared slide.
- Ask students to answer the question using complete sentences in three minutes.
- Collect or ask students to leave on their way out.
- Review the responses.
- Decide on how to address muddy points, e.g. distribute questions and answers in lecture or on online learning platform; cover questions at the start of the next lecture; use responses to focus next tutorial; use responses to focus interim revision/final revision class; develop additional materials such as handouts, podcasts, or screencasts.

Variations / Extension Activities

Muddiest Point Using Online Learning Platforms
- Post your muddiest point question to an online learning platform.
- Set timeframe for muddiest point responses, e.g. within one day of the next lecture.
- Address major themes via lecture/tutorial/extra material/podcast/screencast.
- Address individual queries via quick forum response/email.

Comments

- Do let students know you will not be able to comment on everything but that you will focus on the key areas.
- Do respond to feedback as soon as possible.
- Don't read out the muddiest point question.
- Don't get annoyed if students identify something that you are sure you explained perfectly. You won't always like the responses!

(Angelo and Cross 1993, pp. 154-8)

If Only …

Aim of Activity

To get quick feedback from students on a range of topics.

Prep time	In-class time	Follow-up time	Class size	Risk
None	2-3 mins	Approx 2 mins per 20 students	Any	Low

Materials, Tools, Resources

- Pieces of paper/post-its

Planning the Activity: Steps

- Reserve three minutes at the end of class for the activity.

Implementing the Activity: Steps

- Ask every student to finish a specified 'If only …' question, e.g. 'My learning in this module would be much better if only …'
- Give students two minutes to write.
- Ask students to leave the pieces of paper at the front/back of the room on their way out.
- Review what the students have written.

Variations / Extension Activities

- Summarise the students' comments and tell the students about the comments you received and what you plan to do about them.
- Try this more than once in the semester – twice or at the beginning, middle and end of semester.
- Use any variation on the 'If only …' question that you like – this provides you with endless possibilities re. finding out about your teaching and their learning.

Comments

- Very quick easy way to find out what students think about your teaching and their learning.
- You could share/compare the feedback that you are getting with a colleague who might try the same exercise with their class …

(Race 2005)

Handouts

Aim of Activity

To promote listening, engagement, interaction, assist in learning and provide a break from 'teacher talk'.

Prep time	In-class time	Follow-up time	Class size	Risk
1 hour (approx)	5 mins to distribute and explain	None (potentially)	Any	Low

Materials, Tools, Resources

- Paper – white/coloured/recycled and access to a printer

Planning the Activity: Steps

Choose the Handout Type
Gapped:
- Provide headings/key points for the session to act as signposts for the lecture and leave gaps for students to write their notes in each section.

Exercise:
- Provide individual or group exercise sheets to be completed during the lecture. For example; answer one or two questions/complete a calculation.

Diagram/Chart:
- Provide partially-completed diagrams/charts and ask students to label or complete the diagram/chart.

Complex Data: For Examples/Statistics
- Provide complex statistical data so students spend the time listening/understanding rather than transcribing.

Design the Handout
- Include handout instructions on the handout.
- Leave plenty of white space for student entries.
- Use headings and sub-headings to highlight the structure of the lecture.
- Insert black/white graphics, complex diagrams to avoid lengthy transcription.

Implementing the Activity: Steps

- Decide how and when you will distribute handouts
- Refer to handouts during session.

Variations / Extension Activities

- Upload handouts to the online learning platform in advance.
- Use an online learning platform quiz to set questions instead of handouts. Students can complete these between lectures as a recap. To follow-up, you can display and explain answers during the lecture.

Comments

- Don't over use.

Directed Paraphrasing

Aim of activity

To assess how well students have understood important information and concepts.

Prep time	In-class time	Follow-up time	Class size	Risk
5 mins	5 mins	Approx 2 mins for every 5 students	Any	Low

Materials, Tools, Resources

- Pieces of paper

Planning the Activity: Steps

- Pick an important theory/concept that has some implications outside of the classroom.
- Decide on a realistic audience for the paraphrased topic.
- Plan time in-class for the activity.

Implementing the Activity: Steps

- Ask students to paraphrase the concept for the selected audience – give them a limited about of time and a limited amount of words/sentences, e.g. 'In one or two sentences, paraphrase what you have learned about bilingual schooling to inform a parent considering the possible advantages over single language schooling.'
- Collect the paraphrases either there and then or ask them to leave them on their way out.

Variations / Extension Activities

- Review the paraphrases to assess for accuracy of the paraphrase, appropriateness for the intended audience and effectiveness in fulfilling the assigned purpose. Share some of the best with the students in class. Correct repeated mis-information in class.
- Ask students to paraphrase the same concept for different audiences.
- Ask students to share their paraphrases in class with their neighbours.
- Give handouts of particularly successful paraphrases – ideally compiled from student contributions.

Comments

- In assessing the paraphrases it may be useful in the first instance to divide them into categories such as 'confused', 'minimal', 'adequate', 'excellent' and to work from there.

(Angelo and Cross 1993, pp. 232-235)

Chain Notes

Aim of Activity

To get quick instant feedback from students about what they are learning or about your teaching.

Prep time	In-class time	Follow-up time	Class size	Risk
5 mins	2-3 mins	2 mins per 20 students	Any	Low

Materials, Tools, Resources

- A question
- A4 pages

Planning the Activity: Steps

- Choose something that you want student feedback on – their learning/your teaching.
- Write/print the question at the top of an A4 page, e.g. what question about this topic is uppermost in your mind at this moment? What exactly were you doing in the minute before you got this page? What is puzzling you about this topic at this very moment?

Implementing the Activity: Steps

- Give out an A4 page, with the question at the top, to the student at the end of each row in the lecture theatre.
- Ask the student to answer the question by writing one line only and starting from the bottom of the page – tell them to be quick and honest (but not rude!).
- Ask the student to fold their answer under and pass the page on – demonstrate what you mean by this to avoid confusion.
- Collect the pages.
- Use the information as you deem appropriate.

Variations / Extension Activities

- Repeat the exercise to see for changes.
- Ask students to note the time beside their comments – video your class and cross-reference the comments to what was happening in the class at the time.

Comments

- The honesty of the answers may be hard to take – remember to be balanced in interpreting the information provided.

(Angelo and Cross 1993, pp. 322-326)

Focused Listing

Aim of Activity

To focus student attention on one particular term, principle or concept.

Prep time	In-class time	Follow-up time	Class size	Risk
2-3 mins	2-3 mins	2 mins per 5 students	Any	Low

Materials, Tools, Resources

- Paper

Description

- Focused listing directs students to list several ideas that are closely related to a single topic or concept.

Implementing the Activity: Steps

- Select a topic that students have just studied (or about to study) and describe it in a word or phrase.
- Ask the students to write that word/phrase at the top of a sheet of paper as the heading for a focused list of related terms important to understanding the topic, e.g. 'Postmodernism'.
- Set a time limit and/or limit on the number of items that they will write.
- Using these limits, ask the students to make a list of important words or phrases related to the heading, e.g. in the next two minutes write down as many words/terms/phrases that you know or that you think relate to the concept of 'Postmodernism'.

Variations / Extension Activities

- Allow students to work in groups to create focused lists collectively.
- Make focused lists available for comparison and discussion on an online learning platform.
- Ask students to write definitions for each of the key phrases on the focused lists.
- Have students turn the lists into expository prose, clearly explaining the relationships between the focus point and the items.

Comments

- Choose a focus topic that is neither too broad nor too narrow. A topic that is too broad will lead to divergent lists; too narrow can lead to limited lists.

(Angelo and Cross 1993, pp. 126-131)

Memory Matrix

Aim of Activity

Assessing student recall and basic comprehension of facts and principles.

Prep time	In-class time	Follow-up time	Class size	Risk
12-15 mins	5 mins	3 mins per 5 students	Any	Low

Materials, Tools, Resources

- Handout
- White/blackboard (optional)

Description

- The Memory Matrix is a simple grid comprised of row and column headings representing key concepts and their relationships. Cell contents are left blank. Students fill in the blank cells. Completed matrices provide feedback that can be quickly examined and analysed.

Implementing the Activity: Steps

- Draw a simple matrix with vertical columns headed by main concepts or areas that define the material, horizontal rows highlight different categories or concepts (see worked examples).
- Leave cells blank but large enough for students to list several items if need be.
- Duplicate matrix on a suitable format, e.g. handout, overhead, blackboard and distribute.
- Direct students to provide the information needed to fill in the cells. Set a realistic completion time and lower/upper limit for the number of items you expect them to list.
- Collect the completed matrices, review and provide feedback either in class or on-line.

Variations / Extension Activities

- Allow students to work in pairs or small groups to fill in matrix.
- Use as a whole-class exercise by drawing on the white/blackboard.
- Supply a matrix that is missing elements other than the contents of cells, e.g. leave out one column heading or row and fill in one cell as clue to determining the column/row heading.

Comments

- If students are unfamiliar with this format then begin with simple matrices, limiting the number of categories will help students to master the technique more quickly. While it is a useful way to assess and organise information, the Memory Matrix needs to be acknowledged as a convenient simplification of a more complex reality.

(Angelo and Cross 1993, pp. 142-147)

Memory Matrix: Worked Examples

Spanish 101

Students are given 10 minutes to fill the blank cells with as many different 'base form' verbs as they can recall.

	-ar	-er	-ir
Irregular			
Regular			

19th and 20th Century Western Art

Students are given 10 minutes to fill in the blank cells with the names of major artist they have studied.

	France	United States	United Kingdom
Neoclassicism			
Impressionism			
Postimpressionism			
Expressionism			

Anatomy and Physiology 101

Students are given a 15 minutes memory matrix on the digestive system to see if they understand the connections between structures, processes and functions associated with this system.

	Structure	Functions	Enzymes
Mouth			
Esophagus			
Stomach			
Small intestine			
Large intestine			
Pancreas			
Liver			
Gall bladder			

(Angelo and Cross 1993, pp. 142-147)

Useful Resources

Angelo, T. and Cross, P. (1993) *Classroom Assessment Techniques: A Handbook for College Teachers*, San Francisco: Jossey-Bass.

Bean, J. (2011) *The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom*, San Francisco: Jossey-Bass.

Centre for Writing, University of Minnesota
http://writing.umn.edu/tww/assignments/informal.html

WAC Clearinghouse
http://wac.colostate.edu/intro/pop5.cfm

Writing Across the Curriculum, University of Wisconsin – Madison
http://writing.wisc.edu/wac/node/138

Writing Centre, University of North Carolina
http://writingcenter.unc.edu/faculty-resources/tips-on-teaching-writing/in-class-writing-exercises/

References

Age Invaders (n.d.) Economist.com [online], available: http://www.economist.com/news/briefing/21601248-generation-old-people-about-change-global-economy-they-will-not-all-do-so [accessed 29 March 2017].

Angelo, T. and Cross, P. (1993) *Classroom Assessment Techniques: A Handbook for College Teachers*, San Francisco: Jossey-Bass.

Annotations (n.d.) The WAC Clearinghouse [online], available: https://wac.colostate.edu/intro/pop5c.cfm [accessed 29 March 2017].

Flash, P. (n.d., a) *Teaching with Writing: Informal, In-Class Writing Activities*, University of Minnesota Centre for Writing [online], available: http://writing.umn.edu/tww/assignments/informal.html [accessed 29 March 2017].

Stop Start Continue Change Management Model (2016) Rapidbi [online], available: https://rapidbi.com/stopstartcontinuechangemodel/ [accessed 13 July 2017].

Race, P (2005) *Reinventing Assessment: Towards Assessment AS Learning*, workshop, 1 December 2016, University of Huddersfield [online], available: https://phil-race.co.uk/download/5750/ [accessed 29 March 2017].

Flash, P. (n.d., b) *Teaching with Writing: Now What?: Responding to Informal Writing*, University of Minnesota Centre for Writing [online], available: http://writing.umn.edu/tww/assignments/informal.html [accessed 29 March 2017].

The Believing Game and the Doubting Game (n.d.) The WAC Clearinghouse [online], available: https://wac.colostate.edu/intro/pop5p.cfm [accessed 29 March 2017].

The Problem Statement (n.d.) The WAC Clearinghouse [online], available: https://wac.colostate.edu/intro/pop5j.cfm [accessed 29 March 2017].

What Counts as a Fact? (n.d.) The WAC Clearinghouse [online], available: https://wac.colostate.edu/intro/pop5o.cfm [accessed 29 March 2017].