Implementing Developing Scenario Learning with Branching for Moral Values in Teacher Training

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One of the less considered challenges of teacher training is helping pre-service and in-service teachers to reflect on the different moral values that guide decisions about teaching and learning. For example, when dealing with a student discipline scenario, how should a teacher balance the need for fairness with caring for students? In this paper, ideas from the field of Learning Design and a teaching strategy called "Developing Scenario Learning" (DSL) are described and applied to a discipline scenario for teaching training, with the scenario evolving in different directions depending on an initial choice. An online example of the scenario is implemented with LAMS using the "branching" feature to allow for different pathways, and a template version of the example is provided to allow the branching DSL structure to be adapted to other teacher training topics and to other discipline areas.

Keywords: Developing Scenario Learning, Moral Values, Moral Foundations Theory, Teacher Training, Pre-service, LAMS, Branching, Template.

Learning Design and Teaching Strategies

The Larnaca Declaration on Learning Design (Dalziel et al, 2013) provides a recent summary of developments in the field of Learning Design. It identified three dimensions of the field: a Learning Design Framework (LD-F), which seeks a descriptive framework/language for teaching and learning activities; a Learning Design Conceptual Map (LD-CM), which describes the wider context of education decisions in relation to Learning Design; and Learning Design Practice (LD-P), which applies the other two dimensions of Learning Design to the task of designing effective teaching and learning experiences. The "pedagogic turn" in Learning Design from an earlier primary focus on the more abstract concepts of Learning Design (such as LD-F and related technical standards) towards teaching practice and effective learning experiences (i.e., LD-P) has been a central concern of several recent major books (Conole, 2013; Laurillard, 2012) which are indicative of a broader shift in the field as a whole (Dalziel, 2013).

In terms of implementing Learning Design Practice, one approach to effective design is to use a general "teaching strategy" to guide the design of particular teaching and learning activities for a current group of students. In the Larnaca Declaration, a teaching strategy is defined as:

> An approach to teaching that proposes a particular sequence of teaching and learning activities based on certain pedagogical assumptions. Examples of teaching strategies are capitalised in this paper, for example, Problem Based Learning, Predict – Observe – Explain, Role Plays and WebQuests. A teaching strategy can provide a pedagogical rationale as well as a suggested structure of activities for a learning design. (p36)

While there is a significant literature on the pedagogical assumptions behind various teaching strategies (for Problem Based Learning, see, for example, Savery and Duffy, 1996) there is less work illustrating practical learning designs for a given teaching strategy that could be readily adopted (although see Richards & Cameron, 2008 for a PBL example). In some cases, however, both pedagogical theory and practical examples are included together, such as Wills et al (2009) for role plays.

Hence, the development of new teaching strategies can aid the wider goals of Learning Design by connecting pedagogical ideas with particular ways to implement those ideas in classrooms and in online environments. Where a Learning Design Framework is used to describe and share a teaching strategy, this approach can foster the sharing of effective teaching and learning practices. In particular, if the teaching strategy can be shared as a generic template (also called a Transdisciplinary Pedagogical Template or

TPT – see Dobozy, Dalziel & Dalziel, 2013), then an effective teaching strategy can be potentially adopted not only in its initial area of application, but also in many different discipline areas.

Developing Scenario Learning

Developing Scenario Learning (DSL) is a new teaching strategy that has been developed as a hybrid of elements of two well-established teaching strategies – Problem Based Learning (PBL) and role plays. This strategy is particularly appropriate for education in social science and professional areas where authentic problems/scenarios tend to be complex and could be resolved by several quite different approaches. Some of the reasons for developing this new strategy include:

- Many PBL scenarios (e.g., in medicine) have a "correct" answer, whereas many problems in other professional occupations could have many potentially correct answers, and there are benefits in having students share their different answers and rationales to these "grey" problems (this is similar to the use of Inquiry-Based Learning in humanities and social sciences, e.g., Levy, Aiyegbayo, Little, 2009)
- Many PBLs and role plays are based on authentic problems/scenarios, but they remain "static" for the duration of the problem, whereas many real world problems evolve (often in unexpected ways), and having students respond to a developing scenario can help avoid cognitive rigidity in problem-solving
- Role plays are generally based on students taking on a role that is different to themselves, whereas students preparing for professional occupations need to imagine how they themselves would react in the future to different scenarios, rather than imagining their reaction as someone else.

The activity structure of DSL involves two main "phases" with several activities during each phase: at the start of the first phase, students work together in small groups to analyse a real world scenario (typically a situation they could face in their future professional career). After a period of individual reflection, they then discuss the different issues that may be involved in understanding this scenario (e.g., knowledge, attitudes, emotions, legal, etc.) as a group. After this, each student formulates an initial plan of action to address the scenario (which is shared with all group members). This is the end of the first phase of the teaching strategy, at which point the second phase begins with some new development of the scenario (hence the name "Developing Scenario Learning"). Students then go through a similar process of reflection and group discussion about how the scenario has evolved, and how they would respond (including knowledge, attitude, emotion and legal issues), but they also consider how their initial plan of action, and the assumptions on which it was based, may need to be revised.

For further details about the theoretical background and the structure of Developing Scenario Learning, together with an example from teacher training, see Dalziel (2012). A Transdisciplinary Pedagogical Template version of DSL built in the LAMS software is available from http://lamscommunity.org/lamscentral/sequence?seq_id=1856800

In the 2012 DSL paper, a number of alternative structures for DSL were suggested, including a structure that used "branching" to allow for scenarios to evolve in different ways depending on a student's decision in relation to the initial scenario (this is somewhat reminiscent of the "Choose Your Own Adventure" stories of the 1970-80s). This "branching DSL" approach is explored further below after considering a topic where different decisions could lead to different scenarios – teacher attitudes to moral values in dealing with students.

Moral Values in Teacher Training

Moral values have sometimes been a contentious issue in education, often due to debates about how appropriate moral values can be instilled in students or which moral values should be addressed in a school curriculum (for example, see Hunter, 2008). Another approach is to explore how different moral values are prioritised by teachers in the way they interact with students – for example, in a discipline scenario, how should a teacher balance the need for fairness with caring for students? Recent developments in the field of moral psychology can provide a new framework for exploring how different moral values could come into conflict in educational practice.

Moral Foundations Theory

Jonathan Haidt (2012) and colleagues have developed a framework of six foundational moral values ("Moral Foundations Theory" – MFT) that provides a new lens for analysing many of the challenges and debates of modern life. Each of the six moral values is described in terms of its opposites:

1. Care versus Harm
2. Liberty versus Oppression
3. Fairness versus Cheating
4. Loyalty versus Betrayal
5. Authority versus Subversion
6. Sanctity versus Degradation

In Haidt's 2012 book "The Righteous Mind" (www.righteousmind.com), he explains Moral Foundations Theory and how different groups in society tend to place more or less emphasis on each value, and how different values can come into conflict, particularly in relation to political orientations. One of Haidt's striking findings is how people with different political orientations respond to these moral values – across many countries Haidt has should how progressive (i.e., left-wing) voters tend to score very high on 1, high on 2, moderately on 3, and low on 4, 5, 6; whereas conservative (i.e., right-wing) voters tend to score moderately high (and evenly) across all six. For further research on MFT, see particularly Chapter 7 of The Righteous Mind and resources on the book website.

These findings have two interesting potential implications for teacher training. First, they provide a framework for creating scenarios in which different moral values come into conflict – such as a discipline scenario that can be described in terms of a tension between "care" and "fairness" (MFT values 1 and 3 – see next section). Second, different teachers (and presumably also parents, education academics and students) may respond to these scenarios differently according to the way they prioritise certain moral values, and this prioritisation may relate to political orientations (for recent discussion of moral values and the impact of political orientations on social psychology research, see Duarte et al, in press – it is possible that similar issues exist within the field of educational research).

Applying Developing Scenario Learning to Moral Values in Teacher Training

Based on the concepts of MFT applied to a discipline scenario in teacher training, and using the concept of a "branching" Developing Scenario Learning approach, the following scenario for teacher training was developed. In this context, a "student" who is working through this scenario is typically a pre-service or in-service teacher. Note that the wording of the scenario and the choices, and particularly the subsequent developments of the scenario and choices were designed to emphasise the tension between "care" and "fairness":

> Initial Scenario: Your school has a "3 strikes = suspension" policy regarding significant class disruption. You are teaching a class of 16 year olds. A student who already has two strikes is being restless and difficult in your current class. After a clear warning, he later pushes the books off another student's desk. Before you can respond to this action, he says he is sorry.
> You take him outside the class to talk to him. Do you:
> A: Discuss with him that his action is not appropriate, and that he had been warned, but you accept his sorriness, and choose not to report him for disruption (so he will not be suspended).
> B: Tell him that although he is sorry, he disrupted the class after a clear warning, so you will report him for disruption, which will lead to a suspension.

For those who choose option A, the scenario evolves as follows:

> After returning to class and being quiet for awhile, while your back is turned the student has an altercation with the student whose books were pushed off the desk, and he pushes the other student off his chair. You take him outside to reprimand him, and he is in tears as

he pleads with you saying he is sorry, and if he gets suspended he will get in big trouble at home.
Do you:
A1: Tell him that pushing the other student is completely unacceptable, and the next time he does anything like that he will be reported immediately, but due to his tears and his home fears, you choose (with some reluctance) not to report him (which means he will not be suspended).
A2: Tell him that he was given two clear warnings before, and he has not responded to these chances to behave better, so you will have to report him (which means he will be suspended).

For those who choose option B, the scenario evolves as follows:

After you tell the student you will report him for disruption, he becomes very upset, and in tears tells you that he is really sorry, and if he is suspended, he will face big trouble at home. He says he will accept any other punishment, but pleads with you not to formally report him for disruption because of the consequences if he is suspended.
Do you:
B1: Tell him that he has clearly broken the rules, and deserves to be reported for disruption and suspended, but that you are willing to withhold reporting him if he does a different punishment and stops disrupting class. He agrees, so you choose a different punishment, but decide not to report him for disruption (which means he will not be suspended).
B2: Tell him that he had a clear warning beforehand, and he knew the consequences of a suspension for his home life, so he should have not pushed the books off the other student's desk in the first place. You report him for disruption (which means he will be suspended).

Viewed through the lens of Moral Foundations Theory, the scenario and its alternative developments can be conceptualised as shown in Figure 1, with each student who completes this exercise arriving at one of the four option on the left (A1, A2, B1 or B2).

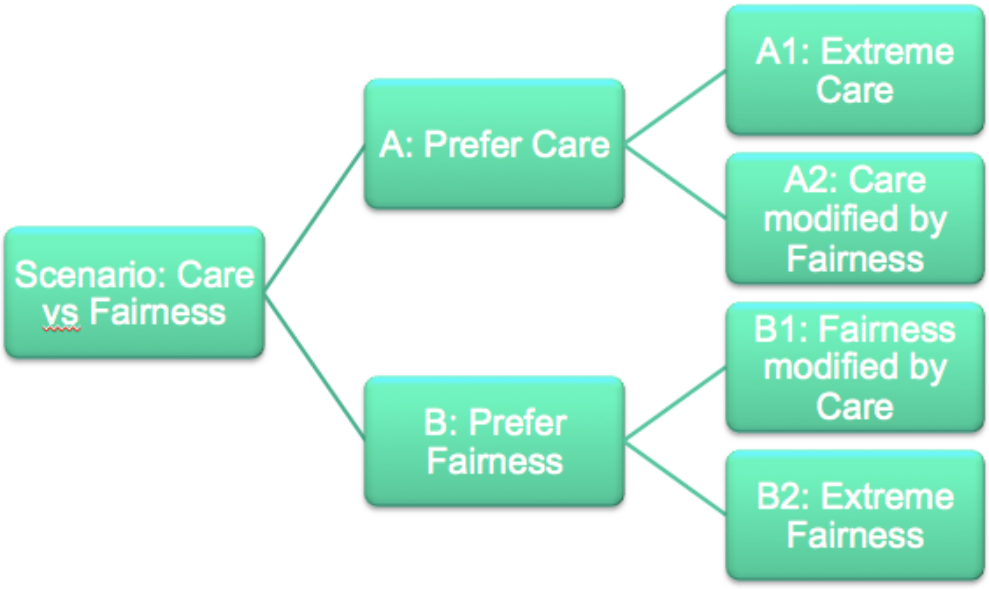

Figure 1: Conceptual representation of moral values choices between "Care" and "Fairness" in initial scenario and subsequent developments of the scenario

This scenario was implemented in LAMS (the Learning Activity Management System – for details, see http://www.lamsfoundation.org) as illustrated in Figures 2 and 3 (Figure 3 shows the detailed view of the activities inside the "Branching" box in Figure 2). After an initial introduction to the topic of care and

fairness in school discipline and an opportunity to privately reflect on this topic, the students where given the first part of the scenario, and then asked to share their thoughts with their peers in the subsequent Q&A activity ("Scenario Thoughts"), and then to choose between the two initial option (A vs. B) in the voting task "Your Decision" (for details of the specific instructions and questions, see the link below).

Depending on the choice in the voting task, LAMS then takes students to either the "Branch A" or "Branch B" (see Figure 3), at which time they are presented with the relevant development of their scenario, then a chance to share their thoughts with those peers who also chose this branch, and then the second set of choices (A1 vs. A2, or B1 vs. B2). This leads to a further branch in which students are given a chance to review their particular scenarios and choices, and to reflect on the point they have reached and any outstanding issues. After this, all students come back together and are able to see all of the scenario options (i.e., all four possibilities presented in full together in "All Scenarios"), and then this provides the basis for a whole class discussion of the whole activity.

In terms of potential modifications of the activity structure, if there is a desire to provide students with additional content related to these decisions and moral values, this could be provided as an extra activity prior to the final discussion forum. Another alternative is the mixture of face to face and online elements – while the example shown is suitable for fully online implementation, a blended learning variation of this would be to complete all activities prior to the final discussion online, and then have the discussion in a face to face environment. In addition, the overall structure itself can be modified, such as for scenarios where more than two choices are desirable, and hence more than two branches are created.

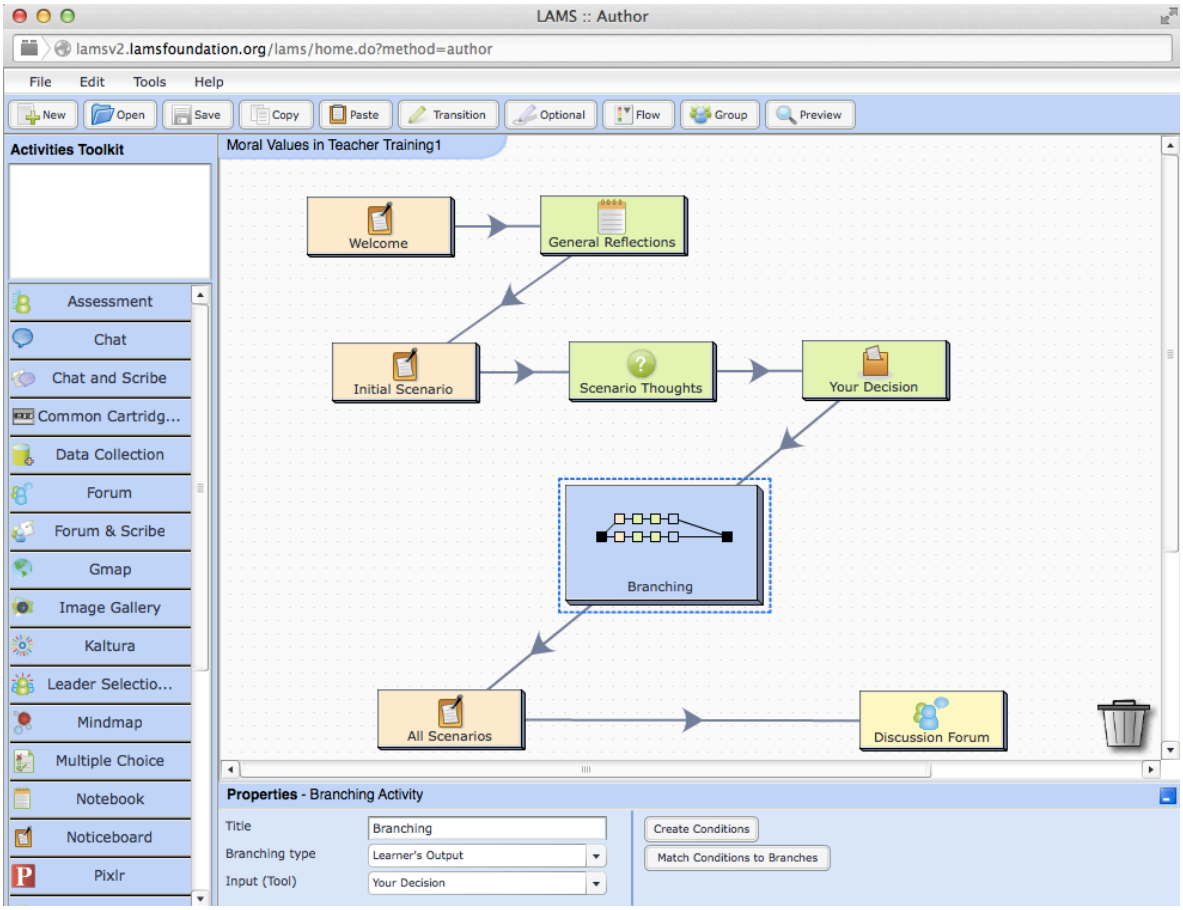

Figure 2: LAMS Authoring view of Moral Values sequence, showing branching based on choice in "Your Decision" voting tool (see Figure 3 for Branching section details)

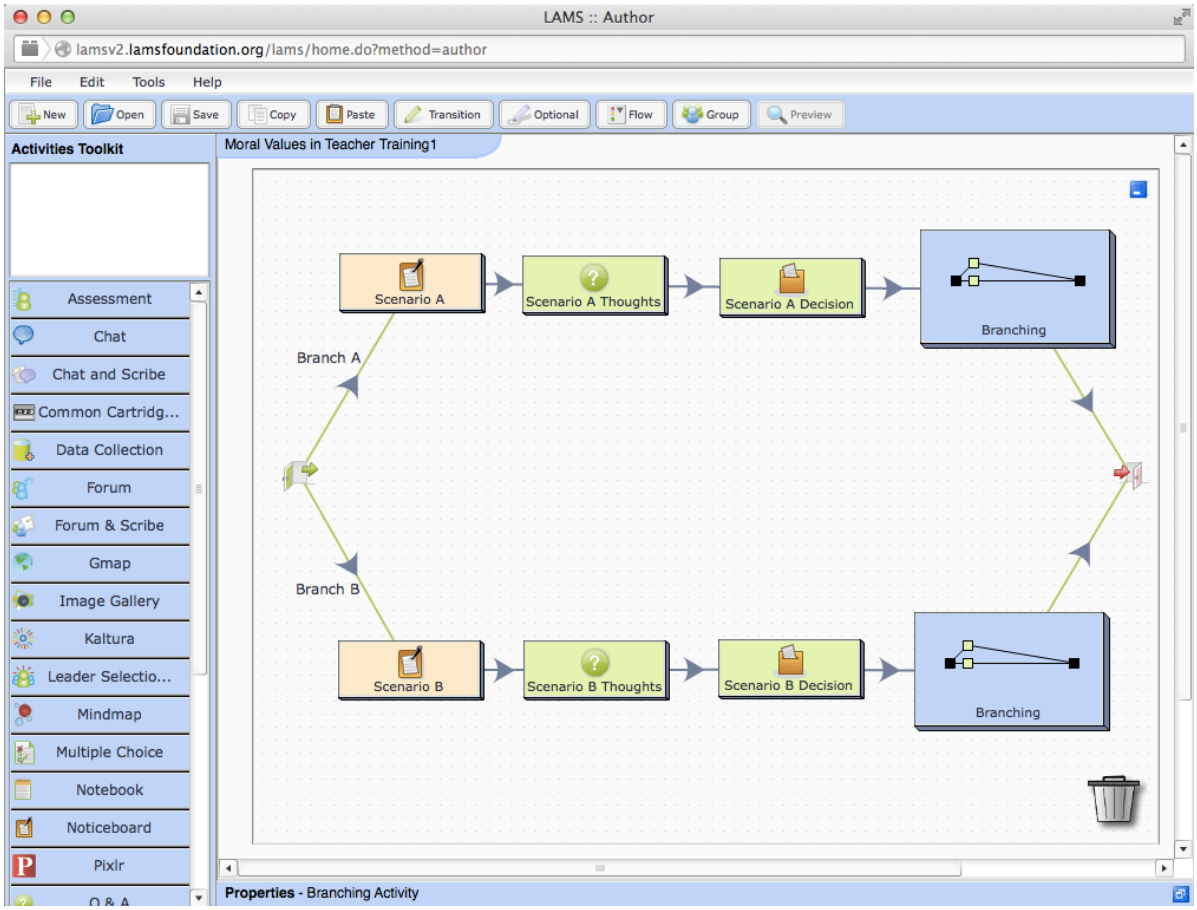

Figure 3: LAMS Authoring showing detailed view of activities inside Branching

The example given above, including all content and choices on moral values in this discipline scenario, is available from http://lamscommunity.org/lamscentral/sequence?seq_id=1874095 It is worth noting that the content of this example could be edited to suit contexts with different priorities of moral values among students participating in this sequence. For example, in a context where student have a significant preference for "care" over "fairness" (perhaps a context with a high percentage of students with a strong progressive political orientation – as per Haidt's research findings) many students may choose A1 without much difficulty. One way to address this context could be to make the A1 scenario more challenging to accept – for example, rather than "the other student being pushed off his chair", the scenario could be edited with "the other student being pushed off his chair and as a result banged his head on a nearby desk and was injured". The general point is that any aspect of the scenarios could be modified to create a more challenging tension among the chosen moral values in order to foster deeper reflection and discussion according to the moral priorities of the student group.

While the particular example given above relates to a discipline scenario in teacher training, there are many other possible topics that could be suitable for a "branching DSL" teaching strategy, both in other areas of teacher training and in many other disciplines, such as psychology, business, government, ethics, health care and others. To support the adoption of branching DSL in other areas, a template was developed that retains the overall activity structure of this example, but with all of the teacher training material removed. This template provides advice on how to populate the template with discipline-specific content. This template is available from
http://lamscommunity.org/lamscentral/sequence?seq_id=1874100

Conclusion

Branching Developing Scenario Learning provides an example of a new teaching strategy that combines useful elements of Problem Based Learning and role plays into a structure that is suitable for student reflection and discussion about challenging "grey area" scenarios. This approach may be particularly relevant to encouraging more authentic learning experiences for students preparing for (or already in) professional careers.

The development of a template version of the example given offers an illustration of how Learning Design Practice (in the terms of the Larnaca Declaration on Learning Design) can be encouraged by the sharing of more than just a "good teaching idea", but also the sharing of a "ready-to-run" practical implementation of this idea, which can then be edited to suit many different discipline contexts.

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