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Learning strategies in interpreting text:
From comprehension to illustration.

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Abstract

Learning strategies can be described as behaviours and thoughts a learner engages in during learning that are aimed at gaining knowledge. Learners are, to use Mayer's (1996) constructivist definition, 'sense makers'. We can therefore position this to mean that, if learners are sense makers, then learning strategies are essentially cognitive processes used when learners are striving to make sense out of newly presented material. This paper intends to demonstrate that such thoughts and behaviours can be made explicit and that students can co-ordinate the basic cognitive processes of selecting, organising and integrating. I will discuss two learning strategies which were developed during three cycles of an action research enquiry with a group of illustration students. While each cycle had its own particular structure and aims, the main task, that of illustrating a passage of expository text into an illustration was a constant factor. The first learning strategy involved assisting students develop 'macropropositions'—personal understandings of the gist or essence of a text (Louwerse and Graesser, 2006; Armbruster, Anderson and Ostertag, 1987; Van Dijk & Kintsch, 1983). The second learning strategy used a form of induction categorised as analogical reasoning (Holyoak, 2005; Sloman and Lagnado, 2005). Both strategies were combined to illustrate the expository text extract. The data suggests that design students benefit from a structured approach to learning, where thinking processes and approaches can be identified and accessible for other learning situations. The research methodology is based on semi-structured interviews, questionnaires, developmental design (including student notes) and final design output. All student names used are pseudonyms. The text extract from 'Through the Magic Door' an essay Sir Arthur Conan Doyle, (1907) has been included as it provides context to analysis outcomes, student comments and design outputs.

Keywords

Action Research; Illustration; Macrostructures; Analogical Reasoning; Learning Strategies.

The process from reading a piece of text and then developing an illustrative response requires three linked stages: comprehension-interpretation-illustration. While each stage will be re-visited during the designing process, they can be seen as progressive. The initial phase involves comprehending the text and making sense out of its content. In an illustrative situation where visual communication to a wide audience is expected, a hegemonic reading, that which most readers should recognise in the text as the writer's intention, is preferred. Werth (1999) talks of a common ground of knowledge shared by the reader and writer which he defines as "the totality of information which

the speaker(s) and hearer(s) have agreed to accept as relevant for their discourse" (p. 125). Clark argues that 'speaker's meaning' requires from the addressee an understanding of the speaker's intention. Meaning is therefore a participatory act, "The joint act of one person signalling another and the second recognising what the first meant I will call a *communicative act*" (Clark, 1996, p. 130). Kintsch (1998) points out that research into meaning is problematic because there can never be a formal method for the representation of meaning that is independent to how meaning is expressed in written or verbal language (pp. 33-34). He states the problem by saying that many different words can be used to convey the same thing. He suggests that the researcher when dealing with words, either verbal or written "must be able to abstract from the particular words and phrases and to deal with meaning relations directly" (p. 34). I would argue that the same case can be made for visual meaning.

While it is accepted that a text can have no single, fixed meaning, and that much relies on the negotiated context; framing a question such as 'What are the key points the writer is trying to convey?', commits an individual to genuinely seek key propositions within a text. I have found that some novice students use a kind of escape clause to rationalise their ideas about text on the basis of subjective meaning. However, an audience can reach consensual agreement on a writer's position within an expository text structure.

The interpretation stage is where text based information is dealt with in such a way as to explain and contextualise its meaning. I have explored a second learning strategy that builds on the first strategy involving text analysis and the development of macropropositions. This second strategy is based on a form of induction categorised as 'analogical reasoning'. It involves explaining a textual message, which is likely to be quite an abstract construct, particularly if it involves human experiences or emotional states, through an analogous situation which can be more clearly understood. Lakoff and Johnson (1980, 2003) talk of how we often partially structure "one experience in terms of another" (2003, p. 77) reminding us that reasoning by similarity is a natural function of cognition. They say that because so many situations we deal with, such as emotions, ideas and time, are difficult to define, we "need to get a grasp on them by means of other concepts" (ibid, p. 115).

Before I discuss how these learning strategies were developed and implemented through my research cycles, I wish to briefly describe the theoretical mechanisms that lie behind the strategies.

Macrostructures

Van Dijk & Kintsch (1972, 1983) introduced the term macrostructures to define the text structures that make up the global, holistic meaning of a text. Macrostructures enable encoding, recall and understanding of the key points of a text. They are created by the use of *macrorules* (deletion, keeping, generalisation and construction) to propositions identified in a text. Macrorules connect lower level propositions with higher level propositions. They are applied iteratively and recursively with a view to reduce data. This involves determining what to keep as important, deleting that which is insignificant, generalising to abstract connected meaning, and constructing information to

integate all the essential properties. The result, by a process of elimination, is the creation of *macropropositions* which represent for the individual the essence, or gist of the text (Louwerse and Graesser, 2006, p. 429).

The identification of macrostructures is therefore essential for global comprehension and meaningful learning. Louwerse and Graesser (2006) suggest that drawing student attention to typographical cues such as titles, headings, sub-headings and paragraphs as indices of text structure can assist macrostructure development. Mayer (1996) talks of comprehension strategies as learning strategies but suggests they tend to be seen as part of the hidden curriculum, "Indeed, we expect students to use effective learning strategies but rarely do we provide instruction in how to use learning strategies in authentic academic tasks such as making sense out of expository text" (p.360).

Analogical reasoning

Analogy is, says Holyoak, a "special kind of similarity", (p.117). Two situations are analogous if there is a recognisable pattern of relationships among constituent elements despite the actual differences between both sets of elements. The two elements are referred to as *analogues*. One analogue is easier to understand or is more familiar than the other analogue. This first analogue is called the *source* and the other, less familiar analogue is the *target.* Asymmetry is the basis of analogical transfer, where the source, because of its ease of semantic access is used to generate inferences to the target—that which requires further explanation or understanding. This is the basis of analogical reasoning. Analogical reasoning goes beyond the new information, using systematic connections between the source and target with the outcome being the generation of plausible, but fallible inferences about the target. Similarity-based inductive reasoning uses the mechanism of *mapping* to achieve its purpose, through the relationship between target and source.

The target situation, that which requires elaboration, provides a retrieval cue for the creation of a source analogue. When this happens, says Holyoak (2005), a mapping *(the purpose of analogy)* is established. This aligns the elements of the source and target. As a consequence of the mapping, one can make new inferences about the target "thereby elaborating its representation" (p. 118).
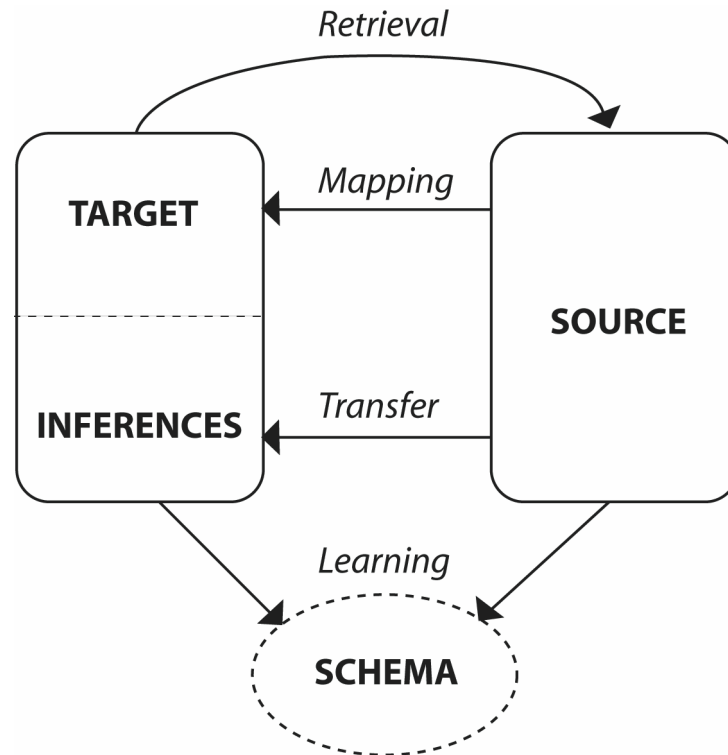
Figure. 1. Major components of analogical reasoning. From Holyoak (2005, p. 118).

Figure one, from Holyoak (2005), traces the major component processes in analogical transfer. The target acts as a retrieval cue for the creation of a potentially useful source analog. If successful, a mapping, or a set of systematic correspondences that align the components of the source and target occurs. New knowledge and connections, beyond that contained in the mapping from source to target can be attained (ibid). Mapping, says Holyoak (2005); Goel (1997); and Holyoak & Thagard (1997) is guided by the goals of the individual looking for similarity, "People draw analogies not to find a pristine isomorphism for its own sake but to make plausible inferences that will achieve their goals" (Holyoak, 2005, p. 124).

Methodology

McNiff and Whitehead (2006) describe action research as a form of enquiry that enables practitioners to investigate and evaluate their work. Noffke (1997) and Dick (1999) describe it as a family of research methodologies concerned with the pursuit of action (or change) and research (or understanding) concurrently. Both these writers also describe it as an emergent process, iterative in nature taking its shape as understanding increases. According to Cohen, Lawrence, Manion and Morrison (2005, p. 226) "Action research may be used in almost any setting where a problem involving people, tasks and procedures cries out for solution, or where some change of feature results in a more desirable outcome". The iterative and cyclical nature of action research leads to a number of steps, originally described by Lewin (1948) as observe—reflect—act—modify. These steps have also been described as

plan—act —observe — reflect (Zuber- Skerritt, 1992). Dick (1993) says that at the very least the cycle involves three phases, intend—act—review.

Swann (2002) notes the striking similarity of action research to the design process as both involve a cyclical and iterative approach to knowledge acquisition. He talks of "the willing contribution that design education has made to that 'culture of mystique'" but says it is now time to fully embrace Schön's epistemology of practice based on reflection. He says "Reflection "in action" and reflection "on action" lead to "action research"(p. 50).

The problem situation

My call to action came about as a result of a developing personal awareness that a large minority of my undergraduate students, studying illustration for the first time often failed to develop illustrative concepts which captured the essence of an expository text. Even when student's were given a clearly stated design brief which requested them to encapsulate the writer's intention through an illustration, the end results could often be obscure—hard to trace semiotically back to the text; or literal— picking up on the most obvious concrete elements described in the text; or they would be based on secondary themes— lesser points made by the author. I engaged in three cycles of enquiry to determine if I could assist students develop effective strategies to enable them to illustrate a text. Figure two outlines each cycle structure and how they interrelate.
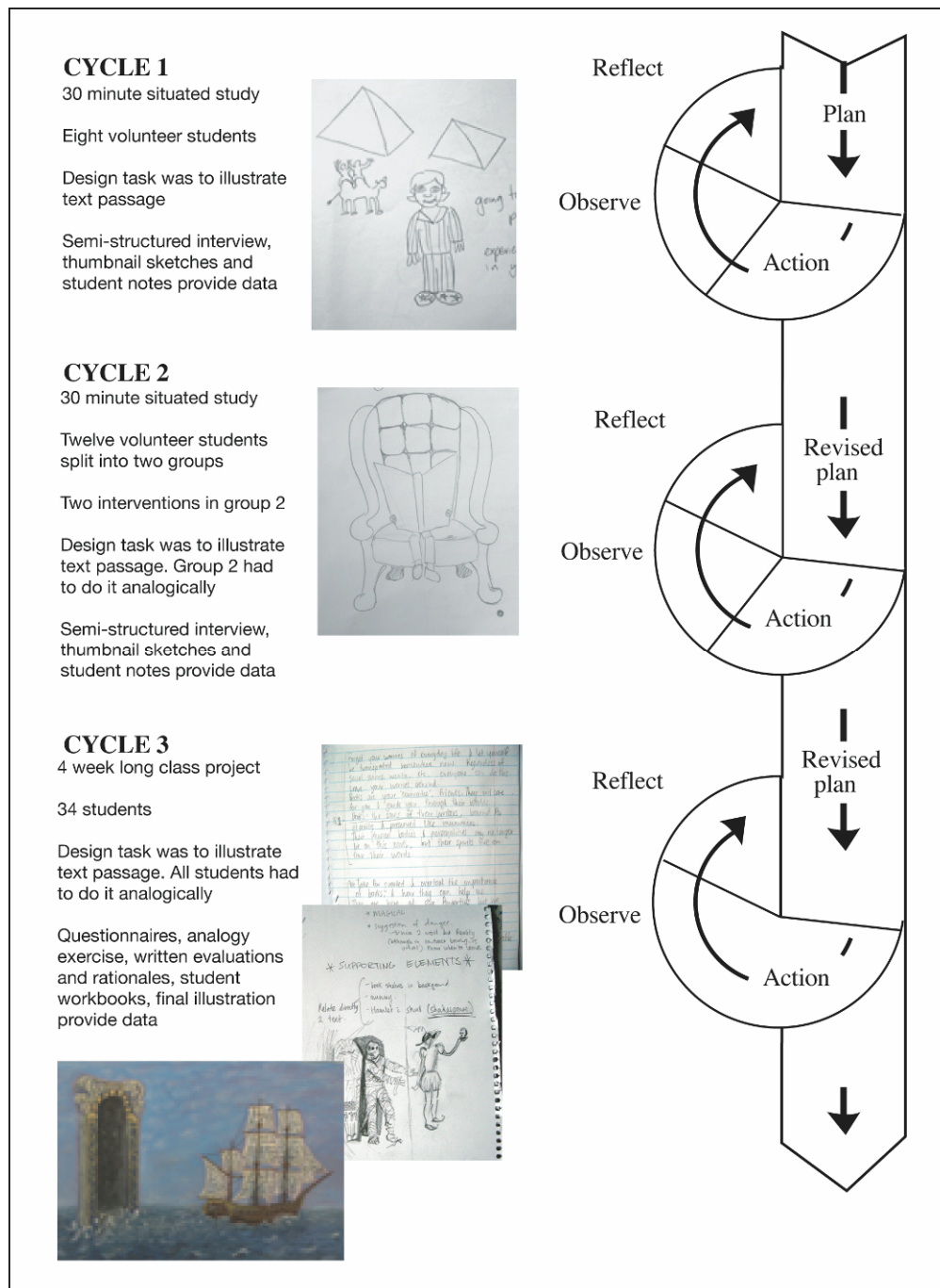
CYCLE 1
30 minute situated study

Eight volunteer students

Design task was to illustrate
text passage

Semi-structured interview,
thumbnail sketches and
student notes provide data

CYCLE 2
30 minute situated study

Twelve volunteer students
split into two groups

Two interventions in group 2

Design task was to illustrate
text passage. Group 2 had
to do it analogically

Semi-structured interview,
thumbnail sketches and
student notes provide data

CYCLE 3
4 week long class project

34 students

Design task was to illustrate
text passage. All students had
to do it analogically

Questionnaires, analogy
exercise, written evaluations
and rationales, student
workbooks, final illustration
provide data

Figure 2. My action research cycle.

Cycle one

The first cycle involved a group of eight volunteer students from the introductory level illustration class. The students met as a group in a controlled situated study and were given 30 minutes to conceptualise the Conan Doyle extract into thumbnail sketches. No particular learning strategies were incorporated.

The author talks of how books can transport us to 'dreamland', where we can leave the worries of life behind us, which he describes as 'dull, soul-killing monotony'. In essence he tells us that the great classics can 'hold you

enthralled' and are wonderful forms of escapism that we tend to take for granted.

The design challenge was to produce sketches/visualised concepts which illustrated the writer's main theme. Students were asked during a semi-structured interview to describe what they believed the main message contained in the text was. Three students said that escapism in books was the key concept. The other five students focussed on describing lesser themes from the text. What was noted as being of potential significance was that two students, Frances and Dana described the text in analogical terms. Frances said the text was about how reading takes you to another world, *'it's like, how would you put it, a holiday, like getting away'*. Dana said

> *'you know, you just open a book and the great masters will come out and teach you stuff and when I saw that I thought, oh it's kind of like Aladdin's lamp'.*

Figure 3. Frances
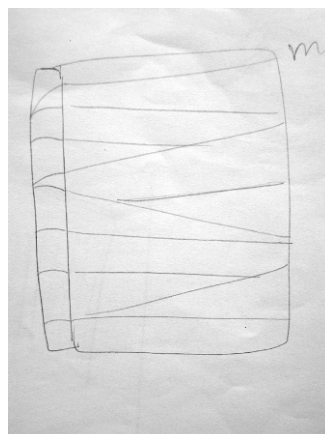

Figure 4. Dana

Figure 5. Brenda

Figure 6. Carrie

While Frances and Dana verbally described the text in analogical terms, it was noted that their conceptual sketches were also analogical, a variation to the other students in the group who created concepts which were quite literal or based on secondary themes from the text. Brenda and Carrie's sketches are

examples of what the other students in cycle one tended to do, focus on a secondary aspect of the text. Brenda refers to dead writers, hence the R.I.P William Shakespeare reference. Dead writers are indeed mentioned in the text but their reference is a secondary, supporting theme to that of the escape which books provide. Brenda said the main textual message was

> '*Probably about how books are an access to a person's well, the author's ideas and so, he's saying that you don't really need, you don't need to worry about the fact that he's dead'.*

Carrie's concept also focuses on dead writers to the exclusion of the key theme. In the text Conan Doyle talks of books as the 'mummified souls' of dead writers. Carrie uses this as the basis for her concept of a book wrapped in bandages

> '*A mummified book, that was just a bit cheesy laughter, but I kind of thought the whole mummified book thing was kind of a juxtaposition to the rest of it'.*

All students in cycle one were asked if they were aware of procedures or strategies used when they were comprehending the text. The replies were vague with most students saying they just kept re-reading the text. Therefore, there appeared to very little metacognitive awareness of their approaches to the reading task.

On completion of cycle one I was able to conclude that most student concepts focused on secondary aspects of the text. Frances and Dana were exceptions. They not only identified escapism as the key theme but described their understanding in analogical terms and devised concepts which were also analogical. The human mind is, says Sloman and Lagnudo, (2005, p. 99) pre-wired to extract relations of similarity and causality and apply them to new situations. However, according to Goldschmidt (2001, p. 211) novice students should be taught how to use analogical reasoning, "when it is doubtful that they would do so spontaneously". Based on what I learned in cycle one I developed two specific interventions in the form of explicit learning strategies which I hoped could lead to more effective learning.

Cycle two

Twelve second year design students volunteered. Students were separated into two groups of six. Gender was evenly matched. Separation was based on academic transcripts with each group evenly matched in previous academic attainment. There were three males and three females in each group. As with cycle one, students had 30 minutes to develop thumbnail concepts which encapsulated the key theme in the text. Two interventions, based on what I learned in cycle one, were added to this cycle. The first intervention involved providing group B with a written sheet containing 11 formal procedures for identifying a text's macrostructure and how that can lead to an analogical interpretation. These procedures were developed from the literature on reading comprehension. The second intervention had three linked propositions. (1.) Group B students were asked to sum up the Conan Doyle text in one or two sentence macro-propositions. (2.) From this summary they were asked to describe it in terms of an analogous situation. (3.) Their described analogy was then to be developed into a visual concept, which

embodied the meaning behind their one or two sentence summary. These interventions were in contrast to that required of group A who were also instructed to illustrate the text but not provided with any particular strategies for doing so. Both groups were told to encapsulate in the sketches the writer's key theme.

Understanding of key concept in text

All students were interviewed shortly after completion of the design task. Students were asked to describe the key theme. During their interview, everyone in group B mentioned escapism while only one student in group A mentioned it. I referred to the sheets containing notes and design sketches that students handed in and also discovered that the words escape or escapism appear in five of group B's notes. In contrast to this, in group A, references to escapism only appear in two student's notes. The following four excerpts indicate variations in responses between the groups. As mentioned previously, group B were supplied with procedures on how to structure an approach to reading comprehension and develop macropropositions, the essential elements of a text.

Q. What would you say the writer was trying to convey in his writing?

I didn't fully understand the message as a whole, I sort of so, the only stage I got up to was capturing little parts and I sort of understood. Well this is what I got from it. (Graham. Group A.)

Em, basically I thought that he was trying to say that we've got the power to listen to what writer's are trying to say by reading their books, by picking a book off the shelf, em, and beginning to read you can sort of hold a conversation with the writers who are dead or understand what they're thinking. (Fiona. Group A.)

He was, it was about escapism, how books are a way to escape everyday life and he was describing how amazingly powerful these books actually are but we don't realise it because we're so familiar with them in a way that blinds us to the full extent, but they've got enough power to other world's and see inside other people's minds. (Mark. Group B.)

I originally thought that he was trying, how that time, that familiarity had lessened our value of what books are and sort of take it for granted. But in the end I've narrowed it down to saying that we take for granted the escape that books provide from the real world. (Noline. Group B.)

Students were asked about how they went about structuring their understanding of the text. I have included typical examples from each group which suggest different levels of meta-cognitive awareness.

Um I read it through all the way just once and then just to get a general idea and then I usually read through things about three, four times just cos you know in case I miss anything yeah but any other time I read through it just go through and like pick out bits that seem to be more important or things that spark off ideas or whatever.(Helen group A)

At the beginning, the title is often the key to the context of the text, so 'Through the Magic Door' was the title of the piece and already that sort of conjures up, this is gonna be something, you know, an escape of some kind and as I read through the text I created links back to the title, you know, how does this title relate to what I'm reading? (Iain group B)

Group B responses were considerably different from group A. Their comments suggest that the learning structure based on using macrorules and macropropositions allowed group B students to more effectively understand the text's macrostructure and retain metacognitive awareness of their approach.

Group B were asked to summarise the text down to one or two sentences and then describe it through an analogous situation. Figure seven shows the different outcomes between groups. Group A students tended to devise literal situations involving people reading books or concepts which picked up on lesser themes. Group B's concepts were based on describing the theme through a physical experience, an analogous scenario to that of escapism through books. This relates to Lakoff and Johnson, (1980, 2003) who say that an understanding of one kind of experience through another shows that associations are structured by "natural dimensions of experience" (p. 235). I describe group B's concepts as 'experiential'.
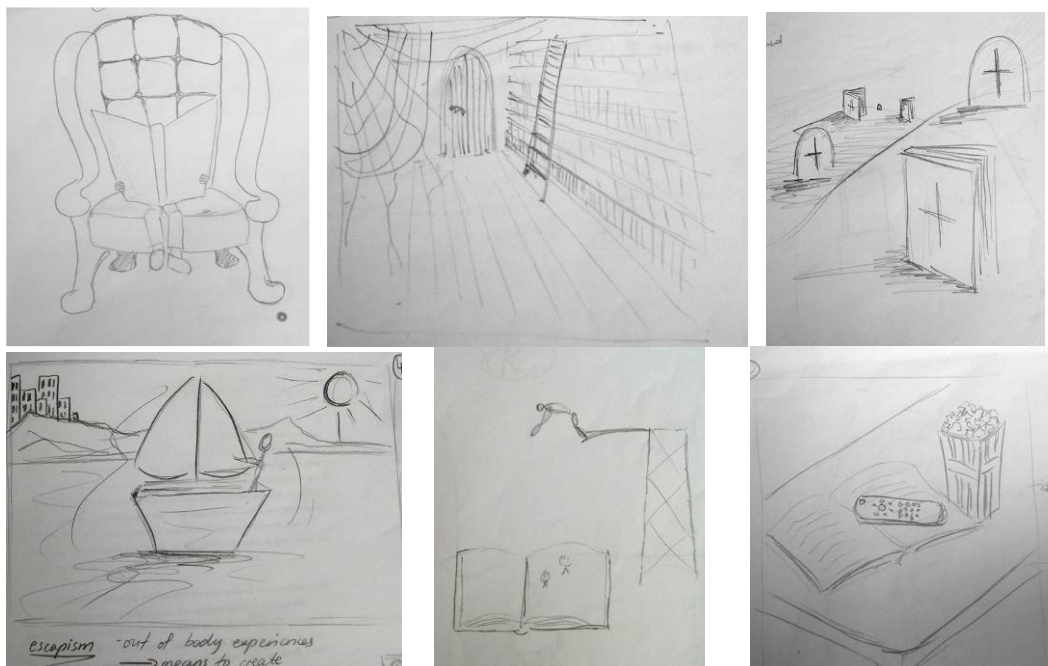

Figure 7. The top three images are from group A. The bottom images are from group B.

Group B students' concepts, as a consequence of being driven by an analogical approach are varied, novel and tend to try and either capture something of the effect books have on us or compare the experience of reading to another situation that has a level of semantic similarity. Group A were not excluded from doing this; they were given the same task of illustrating the writer's message.

Cycle 3

The interventions of cycle two were incorporated into the structure of a four week illustration project. As with cycle one and two, the task of illustrating the main theme of 'Through The Magic Door' remained the same. The two learning structures involving the development of macropropositions and conceptualising through analogy were formally incorporated into the brief. Unlike the first two cycles which involved volunteer students and a semi-structured interview, data was gathered in cycle three through the use of questionnaires, written student reports, workbooks and final design work. All students gave written permission for their work to be used as research data.

Student response to learning structure one which dealt with getting to the essence of the text was positive. The following are representative questionnaire comments:

> I found my process of understanding to be a much more conscious and directed effort (Sally)

> It helped me construct a strategy as to how to go about understanding the story. I would not have done this otherwise and now I have a clear understanding. (Julie)

> Requires you to focus on specifics and directs your concentration. It organises your thoughts. (Eleanor)

> Made it easier to break it down and make it a process, without it it would have been harder to reach a concluded hierarchy. (Tim)

> It made me consider the process I used to analyse the text, instead of just reading through. It encouraged me to systematically break down the text so that I gained fuller understanding. (Kate)

> It made it easier to structure the text and therefore find the main ideas. (Carol)

> It made me consider more, and become more aware of stages and processes I was going through as I read, and linking my thoughts with the authors became something I was aware of. (Karen)

Out of 32 students who answered a question relating to the main theme of the text, only one was unable to identify escapism. All other students referred to it explicitly or implicitly in their questionnaire replies. This further suggests that the learning strategy enabled them to locate the key theme without difficulty.

I will describe two student illustrations from the class which provide an indication of the type of final outcome students produced. The final outcomes are attributable to both learning strategies. Strategy one, involving comprehension, relates to the earlier stage of the design process concerning *problem defining, research* and *analysis,* while strategy two involving analogical reasoning relates more to the creative phase of *synthesis*, where ideas begin to formulate. The final images also incorporate further stages of the design process involving *execution* and *production*.
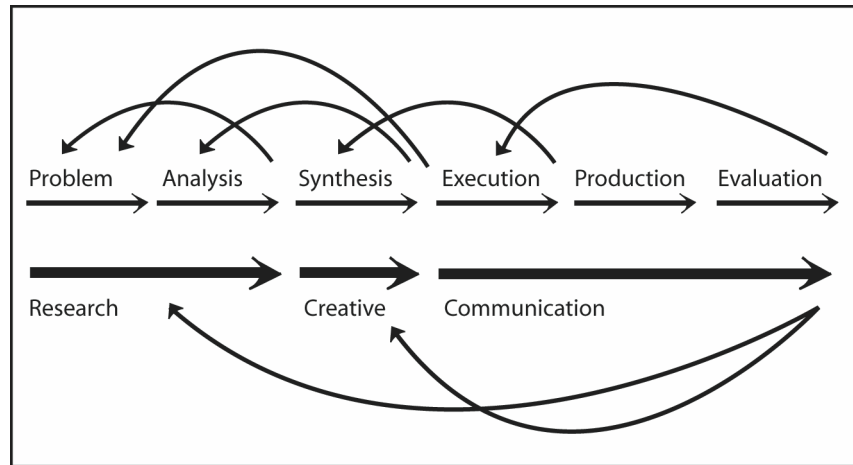
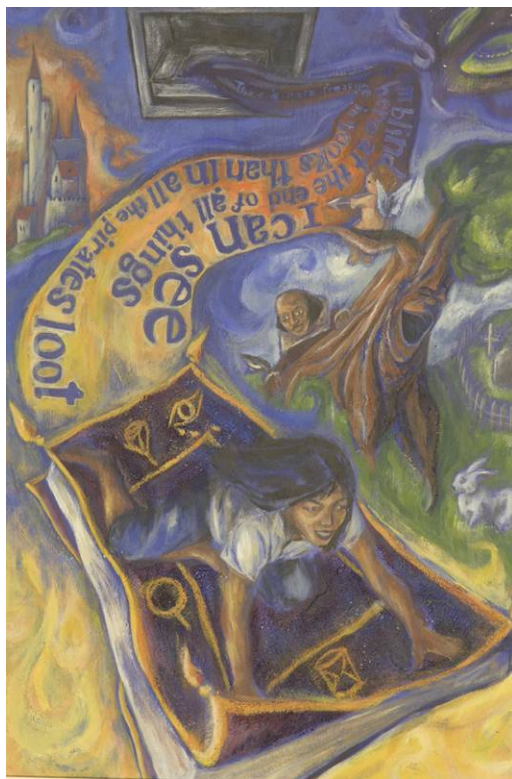Figure 8. Design process model. From Swann, (2002).

Figure 9. Jane's illustration.

Figure 10. Carol's illustration.

I will begin by describing the formal 'denotative' components of Jane's picture. Dark grey window (top centre), blue written text on dull yellow flowing background emerging from window, possibly a quotation. Text joins on to a flying carpet metamorphosed into a book. On this form is a young female figure. The form also has hieroglyphic symbols on it. In the background we see from left to right a castle, William Shakespeare, Cupid, a laughing tree, a graveyard and a white rabbit. On the top right we see a flying saucer. Most of these shapes are evident in the final image. Confirmation comes from looking at the sketches and written comments the student made during the project.

The dominant 'represented participants' is the grouping of a figure on a flying carpet. The flying carpet/book is the 'actor', that which affects and the female figure is the 'goal', that which is being affected. In this instance the vector is the process of the participants travelling from one location to

another. The vector connects two worlds. The grey window represents the real world. The flying carpet is taking the figure to 'dreamland'. I base this on the text from the Doyle text, '*You have left all that is vulgar and all that is sordid behind you*'. In her rationale Jane writes ' *I have painted a magic flying carpet flying out from a dull room entering into a bright, magical world*'. In summing up the text she writes '*That books can take you on a journey and adventure. They can take you to another place or world. That they are magical*'. The driving concept in this image is the analogy that books are like magic carpets. This interpretation is validated by numerous comments, drawings, source images collected by the student and of course the student's own written rationale. My reading of the analogy is consistent with the student's concept. The analogy created by the student allows me to think of books as magical systems of transport. Conan Doyle's text implies this with comments such as:

> '*Close the door of that room behind you, shut off with it all the cares of the outer world, plunge back into the soothing company of the great dead and then you are through that magic portal into that fair land whither worry and vexation can follow you no more… you have but to hold up your hand to them and away you go together into dreamland*'.

In Carol's image we see the hand of a figure emerging from under a floor into a room. There is a ladder connecting the two spaces. Looking down and holding the hand of the emerging figure is another figure in a green deerstalkers outfit. He is holding a pipe in his left hand. Behind him are four other figures. In the room are a chest and a creeping vine. There is an open hatch between the two spaces. The words are slightly covered but it is likely they say 'Magic Portal'. On the left hand side the roof is arched and in the background is a small window. The vector in this image is the connection between two hands. The participant below is the goal and he is being pulled into the attic by the other participant who is the actor. The other participants are 'circumstances', connected contextually to the actor. Each could have taken on the role of actor. The connotative significance of the image is that it picks up on Conan Doyle's reference to books as being unappreciated yet full of richness. Carol compares books to attics, the similarity being that both can lie gathering dust, unused. Yet both contain rich, interesting things when opened.

> '*It is our familiarity also which has lessened our perception of the miraculous good fortune which we enjoy. Let us suppose that we were suddenly to learn that Shakespeare had returned to earth, and that he would favour any of us with an hour of his wit and his fancy. How eagerly we would seek him out! And yet we have him—the very best of him—at our elbows from week to week, and hardly trouble ourselves to put out our hands to beckon him down*'.

In response to the question 'What is the writer's main message/point of view?', given out as part of questionnaire 2, Carol writes '*Books are deeper than we originally think because we are climatised to their presence and fail to see the richness of each journey as a significant form of escapism*'. Her use of the word climatised is, I believe, a reference to Conan Doyle's text which says, '*familiarity also which has lessened our perception*'. In her rationale she writes, '*the setting for dreamland is an old attic. The attic works as analogy for books*

because it is a place where we can find objects which tell stories and offer us a window into the past. Also an attic has the dusty and mysterious qualities which Conan Doyle connects with books'. The analogic source of the attic maps onto our target of books because many of us have at some time in our lives climbed up into attics and found the experience fascinating and also a bit 'eerie' (again a word Conan Doyle uses). The attic analogy allows us to think of books as containing great treasures even though we tend to forget about them and let them gather dust. The experience of opening a book is therefore genuinely similar in a conceptual sense, to that of opening an attic door. Another reason why this analogy works well is that Conan Doyle refers to 'dead writers', that is, works from the past. He doesn't discuss contemporary writers. Attics contain our relics from the past.

Text specifically underlined in the Conan Doyle essay by Carol is 'door', 'magic portal into that fair land', 'dreamland', 'world's greatest storytellers'. She has successfully interpreted these key elements into her picture as secondary supporting elements. We can see evidence of that in the actual characters standing in the attic.

Both Jane and Carol's concepts are hierarchically driven by an analogical concept which provides us with insight into the nature of books and how they can affect us. By identifying the macrostructures within the text they have been able to incorporate secondary elements from the text as support to the main idea. This compares significantly to previous works by students which were often solely based on secondary elements.

Conclusion

Without instruction on learning strategies—both relating to text meaning (comprehension, well–structured) and analogy (creative concept generation, ill-structured), students were less likely to identify or describe the key textual message and develop a conceptual illustration. This was identified in cycle one. Frances and Dana's work stood out from the rest because their interpretations of the text's key idea were holistic and understood in terms of comparing through similarity. While both of these students used their own strategies, and were not assisted in developing an analogical approach, they demonstrated the innate capacity humans have to reason through analogy. The connection being made here is that the analogical concepts developed by Frances and Dana were a consequence of their ability to think of the text in holistic, big picture terms. The other students picked up details from the text, what Svensson (1977) calls 'atomistic'.

It is conceivable that because a written text can be illustrated in multiple ways, a novice may not have the skill of an expert in determining what aspects of the text should be highlighted. A text contains many pieces of information, but without determining a hierarchical relationship in the text between the various pieces of information, a novice may, through lack of expertise, focus on a lesser theme or a very literal aspect of it and then during the synthesis stage of the design process, develop a concept or range of concepts based on the hierarchically misunderstood relationships of the textual information.

The data from three cycles has demonstrated that explicit learning strategies can be applied to creative problem solving scenarios. By employing

conscious thinking methods students are able to attain what Oxman (2001) describes as "learning increments". As such, these learning increments are applicable to other situations. Knowledge is achieved through an explication process which engages cognitive processes and structures of thinking. Cycle one students had no particular metacognitive awareness of their approach to comprehending the text. However, Group B students in cycle two were able to develop macropropositions which demonstrated that they were able to identify the key structures in the text. Group B students' analogical approach allowed them to develop holistic concepts which encapsulated the abstract message in the text by creating sematic links to physical experiences. This supports of Lakoff and Johnson's (2003) assertion that our conceptual system is structured by "natural dimensions of experience" (p. 235). The majority of cycle three students were able to develop accurate macropropositions and use them to summarise the text and find an analogous scenario which could be used as the basis for an illustration. Students were also able to hierarchically structure their concepts, as described in Jane and Carol's illustrations, to incorporate secondary elements from the text as supporting themes to the analogous situation. The final images were rich, innovative and clearly tied to explicit design learning approaches. I will conclude with cycle three student comments on their experience of the learning structures:

> "I learned how to better understand a piece of text through the comprehension exercises and by creating an analogy. I found making an analogy a really effective way to make an illustration not so literal but still understandable to the viewer". (Tim)

> "I think this project has definitely encouraged my thinking process. Initially I found the idea of analogy quite daunting, but I have found I have now developed the ability to think at a deeper level". (Kate)

> "I would be drawing a person sitting reading a book in a gloomy looking study, maybe with bright light outside the window. Thinking about analogy, although a lot more difficult, has enabled me to think of much more interesting ideas, instead of the obvious". (Gayle)

> "Thinking about an analogy has helped me to look further into the text. It has helped me to think outside the square and not go for the obvious way to illustrate the text, but a more creative approach". (Jane)

Arthur Conan Doyle: Through The Magic Door.

> *I care not how humble your bookshelf may be, nor how lowly the room which it*

> *adorns. Close the door of that room behind you, shut off with it all the cares of the*

> *outer world, plunge back into the soothing company of the great dead, and then you*

> *are through the magic portal into that fair land whither worry and vexation can*

follow you no more. You have left all that is vulgar and all that is sordid behind you.

There stand your noble, silent comrades, waiting in their ranks. Pass your eye down

their files. Choose your writer. And then you have but to hold up your hand to them

and away you go together into dreamland. Surely there would be something eerie

about a line of books were it not that familiarity has deadened our sense of it. Each

is a mummified soul embalmed in cere-cloth and natron of leather and printer's ink.

Each cover of a true book enfolds the concentrated essence of a person. The

personalities of the writers have faded into the thinnest shadows, as their bodies into

impalpable dust, yet here are their very spirits at your command.

It is our familiarity also which has lessened our perception of the miraculous good

fortune which we enjoy. Let us suppose that we were suddenly to learn that

Shakespeare had returned to earth, and that he would favour any of us with an hour

of his wit and his fancy. How eagerly we would seek him out! And yet we have

him—the very best of him—at our elbows from week to week, and hardly trouble

ourselves to put out our hands to beckon him down. No matter what mood you

may be in, when once you have passed through the magic door you can summon the

world's greatest to sympathize with you. If you be thoughtful, here are the kings

of thought. If you be dreamy, here are the masters of fancy. Or is it amusement that

you lack? You can signal to any one of the world's great story-tellers, and out comes

the dead writer and they hold you enthralled by the hour. The dead are such good

company that one may come to think too little of the living. It is a real and a pressing

danger with many of us, that we should never find our own thoughts and our own

souls, but be ever obsessed by the dead. Yet second-hand romance and second-hand

emotion are surely better than the dull, soul-killing monotony which life brings to

most of the human race.

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