

VISUAL REPRESENTATIONS AS EFFECTIVE INSTRUCTIONAL MEDIA IN FOREIGN LANGUAGE TEACHING

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ABSTRACT

Although research on the effective use of visual representations in instruction has concentrated predominantly on the teaching of scientific and technical subjects, the principle that visual elements can only be used effectively if they are perceived as important instructional resources that require attentive processing is equally valid in foreign language learning. A study of language learners performing an authentic classroom task in which they were asked to use visual information as a basis for free language production suggested that pictures in this instructional context were processed efficiently but superficially, and were frequently not regarded as significant sources of information. The study also suggested that divergent picture interpretations are not unusual and could lead to communication problems mistakenly attributed to language deficits. A pragmatic way to achieve effective processing of the visual elements in language teaching materials, I propose, is to design materials which include explicit, specific guidance on how the pictures they contain are intended to support language learning activities, together, where needed, with processing instructions.

KEYWORDS: learning with visual representations; foreign language teaching; instructional design; processing visual information; processing instructions.

1. Learning with visual representations: domains addressed by research

A familiar arena in which text and image interact is the foreign language coursebook. But though few publishers today would contemplate launching a language learning series that was not replete with attractive illustrations, there is a striking dearth of research on the uses, effects and effectiveness of visual representations in foreign language learning and teaching (FLT). By contrast, hundreds of empirical studies focussing on instructional visuals in natural science and technical domains have been published since the 1960s (for overviews, see Carney and Levin 2002; Anglin et al. 2004), and research in these areas continues apace, with the focus shifting in recent years from the question of what kinds of

pictures and graphics produce learning effects to the exploration of the effective use of visuals to reduce cognitive load and support schema formation (e.g. Paas et al. 2003).

In reviewing the kinds of material researchers have asked test subjects to learn, Ainsworth (2006) and De Westelinck et al. (2005) list such areas as physics, chemistry, mathematics, biology, ecology, meteorology and alchemy, and specific topics such as bicycle pumps, car brakes, lightning, generators, lungs, soldering, machine functions, vitamins and minerals, geographical time differences, financial decision making and first order logic. Dwyer has used material on the human heart in research spanning some 30 years (e.g. Lin et al. 2006) and Sweller and colleagues have used elements of basic electrical and mechanical engineering instruction in various different studies (e.g. Chandler and Sweller 1991).

Mainstream research on learning with pictures has largely avoided material from the social sciences and humanities, however, possibly due to the difficulty of constructing valid, reliable and quantifiable lab-style experiments to explore knowledge acquisition in these areas. Similar difficulties with research design might also explain why there has been so little work on pictures in foreign language learning.¹ The sorts of experimental set-ups used to investigate learning with visuals in science and technology classrooms are clearly unsuitable for research in the foreign language classroom, since the material to be learnt, the learning and instructional goals, and the types of visuals used in science and technology instruction differ fundamentally from those in FLT. Rather than presenting detailed factual information and explaining complex relationships and processes, language teachers spend a great deal of time providing language input, facilitating language practice and monitoring language production. In science and technology subjects, the question is how effectively visuals reduce cognitive load or facilitate the construction of internal representations that aid the learners' comprehension, retention and recall. But in materials designed primarily to build and consolidate language proficiency, the question for the learners is how effectively they are able to use the visuals to develop their language skills. These differences in how visuals ideally support learning in the two domains have implications that go beyond research design, unfortunately. They also mean that the insights offered by the extensive research on visuals in science and technology instruction are, for the most part, not applicable to FLT at all.

Nevertheless, on the basis of research in completely dissimilar contexts, Weidenmann (1989), Schnotz and Bannert (1999) and Tang (1991) have all arrived at a general conclusion which holds good for pictures and graphics in any kind of instruction. It is that visual representations can only be effective in instructional contexts if they are perceived as bearers of significant, serious information which is clearly relevant to the task at hand, and are processed attentively in the expectation of some kind of learning gain or better management of the task. This premise is central to the study discussed here.

¹ Although Lin et al. (2006) did explore learning effects with visuals in the EFL classroom, the participants were in fact asked to learn complex material in English about the anatomy and functions of the heart – a kind of task most untypical of the FL classroom, unless the language is being learnt for specific or academic purposes.

2. Visuals in FLT

Notwithstanding the lack of research on the effective use of visual elements in language teaching, publishers plainly believe that abundant pictures and graphics are essential in coursebooks for the language classroom. A survey documented in Skorge (2006) found that coursebooks aimed at adult foreign language learners in Germany were packed with lavish illustrations, with 199 discrete pictorial elements distributed over the 119 pages examined. Teachers who used these books, when questioned on their classroom practices and experiences with visuals, affirmed overwhelmingly that they considered them a vital part of their teaching resources (for details see Skorge 2006). But how systematically were the visuals used to support specific language learning and teaching objectives? For one thing, only 15 of the 71 teachers who were questioned had attended any kind of workshop or course on the use of visuals in FLT. The majority indicated that they lacked training in the effective use of visual materials in the classroom. For another thing, the survey of coursebooks, which included the respective teacher's guides, found very few instances where illustrations were accompanied by specific instructions on processing or use. Only one teacher's guide provided a detailed explanation of the book's overall philosophy of visuals in terms of foreign language teaching methodology or instructional goals. Pictures and graphics, it seems, are assumed to speak for themselves whilst automatically fulfilling their learning-enhancing potential.

But are visual elements always used to their fullest potential? Chance observations have gradually led me to doubt that they are, whether by the producers of language coursebooks or by teachers and learners. In the 1980s, when I was commissioned to do freelance illustrations for language coursebooks by the South African educational publisher Maskew Miller Longman, it struck me as odd that my instructions did not come from the books' authors. They came from editors, together with page mock-ups which indicated the spaces that the illustrations had to fill. This suggests that the artwork was viewed as fulfilling design-related requirements rather than supporting language instruction.

Turning again to the study of coursebook visuals and their roles documented in Skorge (2006), it must be conceded that the survey yielded many well-conceived instructional pictures and graphics. Relatively few served decorative purposes alone. Nevertheless, the majority appeared not to have been conceived from the outset as an integral part of the task or activity in question, nor to have identifiable, transparent functions arising primarily from methodologically well-founded language-teaching considerations.

To change now from the producer to the user perspective, it also struck me, in over 25 years of teaching English to adults, that pictures were omnipresent in teaching materials but virtually never commented on in their own right. The copious illustrations, photographs and graphics in coursebooks and other resources were very seldom considered in terms of their intended meanings or instructional roles, be it in teacher's guides,

student's books, by the learners or by me, the teacher. This is not to suggest they were superfluous or merely decorative: they seemed to fulfil their (presumably intended) functions of providing visual glosses, intercultural information, contextualization of language, pragmatic cues, aids to comprehension, impulses for language production, mnemonic effects, etc. adequately – but, as it were, invisibly.

3. How language learners use pictures: A study

3.1. Premises, aims, design

Notwithstanding the general taken-for-granted status of visuals, in my language classes there were rare occasions when a learner's contribution would force us all to look more closely at the illustrations. Someone would produce an interpretation that diverged from the majority "reading" so startlingly and unexpectedly that for once, attention was focussed on the pictures for long enough to negotiate their meaning. And from such incidents, the question arose of whether divergent interpretations of visuals were not in fact quite frequent, but simply went unrecognized. Perhaps learners hastily concealed or revised their differing understandings once the consensus view became apparent; or, more worryingly, when divergent interpretations of pictures led to miscommunication, this was mistakenly attributed to deficiencies in the learners' English (a possibility also raised by Hewings 1991).

It was with these questions in mind that I set out to gather empirical data which would make it possible to examine how frequent divergent interpretations really were, and also throw light on advanced learners' processing, understanding and use of visuals in an authentic classroom activity designed to foster discussion skills. As already noted, there is a vast difference between the science or technology classroom and the communicative language classroom in terms of the activities that go on and the roles visual representations play in them. One common and vital function of pictorial elements in language learning materials, especially beyond beginner level, is to provide impulses for language practice and production. Accordingly, the study described here focussed on visuals with this kind of function, using a writing/speaking task modelled loosely on a picture-based conversation activity (Jones 1997: 13) I had carried out dozens of times in the classroom.

In this activity, learners are asked to look at eight cartoon-style pictures showing situations such as a person smoking in a restaurant, a man standing aside for a woman to go through a door, someone touching food with the left hand and so forth. The learners are asked to discuss whether any of the pictures show "anything that might be considered good or bad manners in your country" (Jones 1997: 13). The task, in brief, relies almost entirely on visual information to generate a discussion on differences in cultural norms. In the classroom, the exercise had periodically produced intriguing, unantici-

pated and highly individual picture interpretations. However, these had only come to light by chance, making me wonder how much consensus on the meanings of the pictures would be found if one were to investigate learners' interpretations systematically. Thus, I devised a similar kind of exercise, but asked learners to state first, in writing, what they thought the pictures actually showed before they went on to give their opinions on the manners they depicted.

As in the original exercise (a fine exponent of a genuinely communicative, culturally contrastive activity for the language classroom), the learners taking part in the study were given cartoon-style pictures which depicted behaviour which might be considered notably good or bad manners in some cultures but not in others, and asked to give their views on the behaviour. In the original exercise, as already indicated, learners were simply asked whether the pictures showed good or bad manners. For the purposes of the study, though, the participants were given two sheets bearing ten different pictures, plus response sheets with the following instructions:

"Please look at these ten pictures and state in one or two sentences what (in your opinion) is happening in the picture, and whether you think the behaviour of the people can, in any way, be regarded as 'bad manners' or as 'bad behaviour', and why." For each picture, the following response prompts were provided:

"Picture [number of picture]: a) What's happening? [six lines in which to record a response] b) Bad manners or bad behaviour? [six lines in which to record a response]."

Although the opinions given in the second step (stating whether the behaviour could be considered bad) sometimes yielded further insights into picture processing and comprehension, from the point of view of the study the statements about what was going on in the pictures were the main focus of interest.

For the purposes of analysis, the learners' interpretations of what they saw in each picture were assigned to following categories: *participants*, *actions*, *atmosphere*, *setting*, *objects/details* and *manners*. By counting the mentions of these elements in the data provided by 140 respondents, finding the majority reading in each case and noting the prevalence and diversity of minority readings, I hoped to obtain straightforward, quantifiable information on the extent of divergent interpretations. But on reading the respondents' handwritten comments, it soon became clear that they were a rich and intriguing source of data. So in addition to classifying and quantifying the interpretations, puzzling or revealing responses were submitted to close textual analysis to see whether evidence of the respondents' picture-processing decisions could be discerned. Some results of this procedure, speculative and interpretive though they necessarily are, make up the major part of Section 3.4, "Findings".

As indicated, one question posed in this phase of analysis was whether the processing strategies of learners could be traced or reconstructed. Of interest, too, was evidence of attentive processing or otherwise. Did the learners appear to have examined the pic-

tures carefully in the light of the task to be accomplished? Or did they seem to consider the meanings of the pictures immediately accessible and obvious? Were the pictures viewed as mechanical prompts to speech production, of little intrinsic interest? Was there any evidence that the learners were uncertain of their interpretations? Did any of them express doubt about their understanding of the pictures?

An analysis of the learners' statements would also, it was hoped, give an idea of the implications their responses might have for the effective performance of the task. The basic mechanism of the original activity, after all, is to elicit unanticipated differences of opinion on good or bad behaviour and manners. This in turn is supposed to trigger a genuine exchange of intercultural views and information. But this can only work if the learners see the same situations in the pictures and go on to discuss their cultural significance. What happens, though, if the pictures per se have completely different meanings for them? Thus, a further question was whether any interpretations differed so strongly and peculiarly that they might jeopardise the chances of a coherent discussion.

The aim of the study was most emphatically not to explore the suitability of specific modes or styles of visuals for a given task; nor was it to discern individual differences in levels of visual literacy or putative cultural differences in picture interpretation. Its exploratory nature should also be emphasized. The chief goal of the study was to investigate whether and to what extent divergent interpretations of pictures would occur in an authentic classroom task, to count and categorize the divergences and speculate cautiously on the causes and effects. At no point was it conceived in terms of comparing the effects of different test conditions on participants' performance, nor indeed would this have made sense without first gaining some insight into the extent and nature of divergent picture interpretations.

3.2. Materials and participants

The ideas for the ten drawings I prepared for the study came from intercultural information given in guidelines for international business contacts, student exchanges and advice for travellers. By producing my own drawings, I was able to reflect on difficulties in encoding certain kinds of visual information, and also to state with certainty what the pictures had been intended to show. I concede at once that the intended meanings of the pictures may have simply been obscured by sloppy drawing in some cases. It cannot be emphasized enough, however, that the aim of the study was not to discover whether the participants interpreted the pictures "correctly" or not. Nor was it to ascertain whether the nature of the pictures had any effect on the successful performance of the task. If, whilst recording their responses, learners expressed concerns about not stating the "right" meaning, they were told that any interpretations they arrived at were valid. In the subsequent analysis picture interpretations were categorized as mainstream or divergent, not right or wrong.

The participants were 115 learners of English and 25 learners of German attending adult education courses or university seminars and courses in Bielefeld, Germany. Although the participants' proficiency levels ranged from A2 (pre-intermediate) to C2 (fully proficient) on the CEFR,² the data were collected in the target languages, both in the interests of authenticity – of which more will be said presently – and because the learners of German had a range of different L1s.

The learners of English all had German as their L1 or were living, working or studying on a long-term basis in Germany. The group learning German was composed of single members from Belarus, Bulgaria, Georgia, India, Indonesia, Iran, Iraq, Korea, Kyrgyzstan, Turkey, and one undisclosed country; two from Estonia, Japan, Poland, Serbia and Montenegro and Ukraine, respectively, and four from Russia. This data, let it be said right away, is included only to give a fuller picture of the context of the study. There is a widespread notion that the perception of visual information differs across cultures, and I discuss the question in depth and with some scepticism elsewhere (see Skorge 2006). Here, suffice it to say that all the learners of German (who were enrolled at a German university and taking part in courses at C1 level) can be assumed to have had enough media exposure to be familiar with the representational conventions of the cartoon genre. Certainly, the data offered no evidence whatsoever of any divergences in interpretation at the level of representational techniques.

3.3. Authenticity

The task, as stated before, was based on an authentic speaking exercise, and the materials were conceived from the outset not in terms of ambiguous, challenging or culturally specific images designed to elicit flamboyant interpretations. Rather, the approach was to prepare a viable teaching unit in which participants had to make use of pictorial material: this was preceded by a phase in which the usually tacit and unquestioned process of interpreting the visual information was made manifest. To obtain insights into the picture interpretations and their implications when carrying out the task under these realistic conditions, it was essential that the learners were *not* told in advance that they would be going on to discuss differing cultural or personal conceptions of desirable behaviour. It was anticipated that different views would be expressed, triggering a lively, spontaneous discussion. Different opinions are what fuel the exercise; and what makes it so attractive for research on learners' use of pictures is the fact that the essential impulses for verbal interaction are provided in pictorial form.

The data were obtained during normal classes either taught by myself or by two colleagues who gave brief, informal accounts of the sessions to me afterwards. After the written data had been collected the teachers went ahead with the discussion on intercultural conceptions of good or bad manners and behaviour and found that the pictures

² Common European Framework of Reference for Languages.

functioned satisfactorily as prompts for oral work. Apart from being embedded in a practical language learning activity, the study was also authentic in the sense that it was carried out in courses-in-progress in established groups of learners with an overall commitment to improving their language skills.

3.4. Findings³

The data did not suggest that divergent interpretations were either very frequent or extreme. For the most part, the participants' statements of what was going on in the pictures coincided with the intended meanings. Where divergent interpretations did come to light, many were classified as "non-intrusive". That is, they were related to trivial details (identifying an object intended to be a milk-jug as a coffee-pot, for instance) and would have been unlikely to lead to serious miscommunication in the classroom. Of the 140 participants in the study, none gave consistently odd or divergent responses which might have indicated an individual with serious deficiencies in visual literacy. Nor did any of the respondents, including the 25 members of the mixed-nationality group learning German, produce any interpretations that remotely suggested culturally-determined differences in picture comprehension. The findings, in short, provided no evidence that any of the participants could not process visual representations competently and efficiently. But did they process them carefully and attentively, and were the details which had been designed to form the basis of an effective discussion identified satisfactorily?

My claim is that the data reveal how the requirements of the language practice task (as the learners understood them), that is, the verbal production component of the activity, took clear precedence over picture processing, which was perceived merely as a means to a (verbal) end and carried out as economically and mechanically as possible. In the following, I will examine a number of responses in detail and argue that the descriptions were superficial readings of the pictures and were not consistent with the visual information they actually contained. Where responses are quoted, this is done so verbatim with the original grammar, punctuation and spelling; the translations of responses in German are my own.

3.4.1. Case one: the man in the middle

The picture of the man squashed between two other people (Fig. 1) was intended to prompt a discussion of intercultural differences in proxemics and culturally-specific attitudes to bodily contact with strangers. The drawing fulfilled its communicative inten-

³ This is of necessity only a brief outline of the findings discussed in detail over some 30 pages in Skorge (2006).

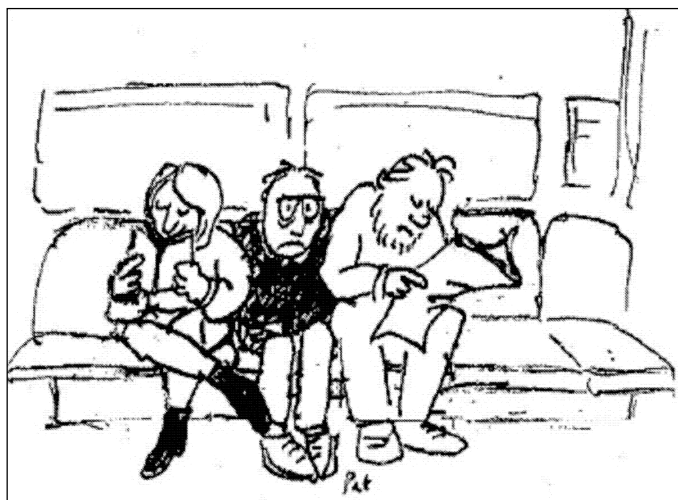


Figure 1.

tion for the most part, since 101 of the 140 respondents described the picture as showing two people thoughtlessly invading a third person's intimate space. Nine participants, however, stated that the man in the middle looked miserable because the other two were ignoring him, which was bad manners on their part, as in this example: "Three people are sitting on a bank [i.e. bench, P.S.]. The woman reads a book, the elder man reads a newspaper, and the man in the middle is sad about it. He is bored, because nobody speaks to him".

I will explain presently why I believe this interpretation to be symptomatic of over-efficient processing, but first recall that the ten pictures prepared for the study showed behaviour that might be considered good, bad or unexceptional in certain cultures but would be viewed differently in others, the aim being to spark off a discussion on norms of behaviour across cultures. To reiterate, the instructions were: "Please look at these ten pictures and state ... whether you think the behaviour of the people can, in any way, be regarded as 'bad manners' or as 'bad behaviour', and why." A great many participants appeared to assume that all the pictures showed *only* bad manners or behaviour, which it was their job to identify – a misconception which provided unexpectedly fruitful insights into the effects of the perceived task on picture interpretation.

Why might the view that the man in the middle is being ignored indicate inattentive processing? Principally, because it takes no cognizance of the most salient and informative visual information in the picture: the white elbows occluding the black figure of the man, the empty seats on either side of the three cramped figures. Intent only on finding an instance of bad behaviour, these respondents fix too early on a reading which is at odds with the narrative logic of the drawing. Certainly, the participants had been told that all their interpretations were valid, and pictures, like poetry, are open to interpreta-

tion; but interpretation is nevertheless constrained by the information the poet (or illustrator) provides, and the prominence given to this information.

The kind of superficial processing apparently taking place here is referred to by Schnotz (e.g. 2005) as resulting from the desire for “cognitive economy” on the part of the learner. That is, learners discern a particular aim of the task (in this case, identifying bad behaviour) and try to achieve this aim with a minimum of cognitive effort. As soon as an instance of bad behaviour had been located, the processing effort broke off and the interpretation was finalized. Other visual information, however inexplicable or difficult to reconcile with the version decided on, was thus not taken into account. Weidenmann (1989: 163) warns that the ease and skill with which we process pictures may, in instructional settings, lead to their potential as sources of information being undervalued, because “the subjective ease of encoding them at a superficial level may lead the learner to the illusion of a full understanding. As a consequence, the subject may stop the information processing after only a short glance.”

Further examples of superficial processing of Fig. 1 related to the setting. The picture was intended to show people sitting much too close (in terms of western norms) to each other on some sort of bench or row of seats, with windows behind them; but the background was only vaguely suggested, in the hope of prompting speculation and fueling discussion about the location. A large number of respondents (88) stated, as anticipated, that the people were using public transport or were in some kind of waiting area. Statements about the environment that suggested inattentive processing, however, included one that the three people were on a “park bench” (which picks up the idea that they are strangers but has little support from the other visual information provided) and, more interestingly, nine mentions of a sofa or couch, though none specified where it was. If this is a sofa, what mental schema or script has the picture activated? Sofas are normally found in the living-rooms of private homes: so who are the actors in this tableau? Is the figure in the middle a guest, a ghost, a child, an illiterate sibling, an insurance salesman? Why are the other two huddled so close to this person, but ignoring him? This interpretation of the drawing suggests that these respondents do not expect visual materials in a language learning task to provide meaningful information: rather, they have settled on the first reading of the depicted objects and actions that springs to mind, without being concerned about the lack of overall coherence in the visual narrative that emerges. It cannot be entirely ruled out that the nine German-speaking participants who wrote “sofa” meant ‘bench’, but produced “sofa” due to lack of lexical resources or by association of ideas. But since the German and English words for this piece of furniture are identical, the possibility seems remote.

3.4.2. Case two: The dog in the drawing-room

Not only is the processing effort sometimes broken off too early, but there is evidence in the following responses that once learners have arrived through over-efficient process-



Figure 2.

ing at a specific reading, they have difficulty in revising their interpretation, even if other picture details are incongruent with it. The two intercultural issues the picture in Fig. 2 was intended to raise were (a) the acceptability of having pets in the home and (b) pointing one's foot at someone, sole showing, which is insulting in some South East Asian and Middle Eastern cultures. Most respondents identified the roles as intended, seeing the person on the left as a guest and the one on the right as the hostess and owner of the dog, and the majority also understood the situation as I had tried to represent it, commenting frequently on the man's fear of the dog and the woman's insensitivity in allowing it into the room. No-one commented on the pointing foot.

Five respondents offered what may be an inattentive reading by identifying the two people as husband and wife, basing this reading presumably on the constellation of man-and-woman plus domestic situation (tea, dog). But this hasty reading fails to take up further, more puzzling visual information and so leaves a number of questions open: Why is the man so uneasy? Is he afraid of his own dog? And why should he dress so formally to drink a cup of tea in his own home? In one of the responses identified as "inattentive", the participant wrote: "Eine Familie beim Abendessen. Die Frau redet ohne Pause. Der Mann wollte sie unterbrechen, konnte aber nicht." [A family having their evening meal. The woman is talking incessantly. The man wanted to interrupt her, but wasn't able to.] The processing path followed by this respondent seems to proceed something like this: having decided in over-efficient initial processing that man plus woman plus food on the table signifies a family meal, he now has to find an instance of bad behaviour. Whilst looking for one, he notices the discrepancy between the woman's amiable expression as she talks to the man, and the man's evident disquiet and distraction, and finds they cannot easily be reconciled with his reading of the roles. At this point, the initial premise of a family meal is becoming in-

creasingly untenable: but instead of revising it, he arrives at a creative, if misogynistic explanation for the “husband’s” discomfort: he is looking miserable because he can’t get a word in edgeways, and the bad behaviour is the wife’s incessant talking. The dog, so prominently placed at the centre of the composition, is not mentioned. Possibly it is viewed as a member of the “family”, or as a jolly but meaningless addition, like cartoon animals on shop signs and packaging. Clearly though, the narrative logic imposed by the initial reading makes it extremely difficult to account for the dog at all.

Another interpretation of Fig. 2 was this: “Eine Ehepaar sitzt zu Hause und unterhält sich miteinander. Der Hund schaut auf den Mann. Der Mann ignoriert die Frau.” [A married couple are sitting at home talking to each other. The dog is looking at the man. The man is ignoring the woman.] This reading is sufficiently attentive to note the salient details of the picture, but the respondent fails to find a way of linking them coherently. Once again, the premise that this is a married couple becomes increasingly less tenable in the light of the details that emerge under closer scrutiny. In particular, if they are a couple, the dog presumably belongs to them both, and why would the man be shrinking from his own dog? To avoid this logical impasse, the respondent interprets the fact that the man’s gaze is directed at the dog an index of “ignoring the woman”, not as “anxiety about the dog”. But if the husband is ignoring his wife, this, in turn, is not consistent with their having a conversation and does not account for his alarmed expression. The interesting point here is that in neither case presented so far is the respondent prepared to go back and reconsider the original premise that the picture shows a married couple, even though in one instance it means the effort of constructing a reading largely at odds with the picture, and in the other the attempt to discern some kind of narrative logic is abandoned altogether. Evidently the initial interpretation of roles and actions cannot easily be revised, even if further examination of the picture reveals more and more details that are inconsistent with it.

In a third response, though, such a revision could be traced. The learner wrote: “Ein Familienabend vielleicht [sic], ein Mann ist traurig. Es kann sein, dass er ein Gast ist.” [A family spending an evening together perhaps, a man is sad. He might be a guest.] Although in this case too the student’s “family” schema is activated in her initial processing of the picture information, she is unsure about this interpretation from the start, as the addition of *vielleicht* ‘perhaps’ to her first statement shows. As she examines the picture more closely, she notices that the man looks unhappy, which casts even more doubt on her initial reading. Rather than meaning that he is sad because he is a guest, the final statement, “He might be a guest”, signals that she is starting to revise her first reading of the picture completely, but – perhaps due to lack of time or linguistic resources – she does not elaborate further. Note that the dog is not mentioned at all in this response either, again perhaps because the “family” interpretation does not offer any immediately obvious function for it other than as a token of domestic cosiness.

4. Discussion

4.1. Identifying divergent interpretations

Having the participants record their responses in the target language added a further dimension of authenticity and revealed how tricky it can be to disentangle interlanguage phenomena, learner strategies or infelicitous dictionary use from picture interpretation factors in learners' language production. It emerged for instance that a number of responses which were initially classified as divergent picture interpretations simply gave that impression on account of misleading lexical choices. For example, an A2-level participant stated that a picture which included what was intended to be a girl holding a doll (Fig. 3) showed a girl holding "a puppy".



Figure 3 (detail).

This is more probably a lexical interference from the German *Puppe* 'doll' than a divergent reading of the picture though. A further clear example of lexical interference surfaced in a response to Fig. 4, which was meant to show a young man spitting in the street: a learner wrote that it shows a "boy spying on the street" (from German *speien* 'to spit'). For the same drawing, another respondent wrote "the young man haunt on the street" [sic].



Figure 4 (detail).

This learner apparently looked up German *spuken* ‘to haunt’ instead of *spucken* – a synonym for ‘to spit’. Thus the “real life” conditions of the study and the qualitative approach adopted threw additional light on the complexity of researching the effectiveness of visual materials in the context of the foreign language classroom.

4.2. Potential for miscommunication?

Since the study did not investigate how the learners used the pictures in a speaking task, it cannot claim to demonstrate that inattentive processing leads to miscommunication in the language classroom. In places, the data do suggest possible scenarios for miscommunication, however. Potential for miscommunication can be illustrated best with reference to responses given by 21 participants who were only given the second part of the instructions. That is, they were asked to state whether they thought the behaviour shown could be regarded as bad, but not explicitly instructed to say what was happening in the pictures. Although most of the responses included enough concrete detail to indicate how the respondent had interpreted the picture in question, roughly ten per cent of the answers did not.



Figure 5.

The examples that follow relate to the picture in Fig. 5, which was supposed to depict a woman ostentatiously blowing her nose in public (a highly offensive behaviour in some East Asian countries) but was interpreted by slightly more than half of the respondents as showing a woman crying in public. This unexpected result provided an excellent opportunity to observe how unswervingly the respondents stuck to the one or other interpretation, and how the version they opted for influenced their understanding of

pretation, and how the version they opted for influenced their understanding of other picture details.

In responding to the question “Can this, in any way, be regarded as bad manners or bad behaviour?” without first stating what the picture in Fig. 5 showed, members of this group gave answers, quoted here in full and verbatim, such as: “Nothing wrong with that”; “No, with a handkerchief outside away from the face of the man”; “He shouldn’t stare at her in that particular situation”; “Of course you can’t force anyone but caring for the others makes life in a community so much easier. Therefore, I wouldn’t consider the situation in picture 2 bad manners but bad behaviour”. A further example of a response which may have led to confusion referred to Fig. 1, the squashed man: “Normal behaviour in Germany! While sitting in the train remember to bring a book or a disk-man!”. Here, as in a great many of the nearly 1,400 responses gathered in the study, the participants evidently regard the pictures as each having a single meaning which is apparent to all. Analysis of the data however suggests that complete consensus on the meanings of pictures is rare.

If the learners had given these responses (“Nothing wrong with that”, etc.) in a group discussion, though, one could argue their classmates would have sought clarification. And clarifying the terms of reference would, from the point of view of skills consolidation, have produced a valuable classroom exchange. Well, maybe. But do these responses invite further probing? Asking bluntly, “In what particular situation?” or “What exactly should the person do with the handkerchief?” or “What is it that’s ‘normal behaviour in Germany’?” may well be deemed face-threatening and felt to violate discourse norms that form part of the learners’ pragmatic competence in both their L1 and the L2. Besides, statements that the pictures might be understood in various ways were extremely rare in the data, and, as we have seen, participants were loath to revise their initial readings. Apparently, picture interpretations, once arrived at, quickly come to be regarded as immutable; and why should participants in a picture-based discussion suppose that exophoric references denote something other than “their” own respective readings of the picture? The exchange may be awkward, certainly, but language learners are used to communication difficulties, and are likely to assume they arise from deficient language skills and not different understandings of visual representations.

4.3. Further implications

As mentioned earlier, Weidenmann, Schnotz and others warn of the perils of perceiving instructional visuals as “easy media” or of seeking “cognitive ease” in processing them. The inattentive processing mirrored in the picture interpretations discussed here shows such warnings to be justified in the context of a free language production task in a communicative language classroom as well. The principles that instructional visuals have to be processed more slowly, more consciously, more attentively than images in

the media, on packaging and in advertising, and that effective use of them involves extracting substantive information pertinent to the task at hand hold no less true for a writing/speaking activity than they do for science and technology instruction. Is the implication then that all language learners ought to be drilled in the processing of instructional visuals, and all student teachers receive extensive training in communication with visual representations? This is a tall order, and even if there were a sudden, welcome revolution in thinking about the roles of pictorial elements in FLT, such measures would be slow to bear fruit. It would be far more pragmatic simply to integrate picture processing instructions into FLT materials, just as directions for the use of the verbal materials are. This would compensate directly for (a) different levels of visual literacy, (b) tendencies to disregard visual information and (c) disparities in teachers' abilities to use visual resources effectively. If producers of FLT materials were committed (as, at present, few are) to viewing the visual components as serious instructional media, and if they used them to fulfil explicit language learning functions, they could integrate them into the materials from the earliest stage of planning. Teachers and learners who used the materials would then be guided automatically towards more conscious processing.

The challenge lies in deciding what processing instructions should be provided, and how. These are in turn determined by the task type and the role the visual elements play in the task. In the exercise designed for the picture interpretation study I have been discussing, it would make sense if the discussion partners did all say what they think each picture shows before moving on to the question of bad behaviour, not so as to ascertain the "correct" meaning of the picture (communicative language classrooms thrive on debates and differences of opinion) but to alert each other to potentially disruptive divergent interpretations. Preceding an exercise with a tiresome round of "saying what the picture shows" is rarely required, however. Processing instructions can also take the form of explicit guidance on how to deal most productively with specific visual materials, by indicating for instance whether they have been intentionally designed to elicit individual interpretations and so stimulate debate (above all in speaking activities), or whether the class will have to arrive at a consensus in order to use them effectively (for example as a basis for grammar practice) or even if the teacher will have to specify a particular meaning (essential if they are being used to introduce lexical items).

While the faith which producers of FLT materials and language teachers place in visual representations seems justified, if under-researched, it is clear that such resources could be exploited far more effectively in this area of instruction if they were conceived by producers of materials in terms of specific and explicit language-learning objectives and if learners and teachers were provided with appropriate processing guidance to ensure that the visual elements fulfil their instructional potential.

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