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What do teacher's think about the educational role of comic books?: A qualitative analysis

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Abstract

An exploratory, qualitative, study into the views of teachers on the use of comic books in education was carried out. Three secondary school teachers with varying experiences of comic books were interviewed using an open-ended format. Results of a thematic analysis indicated three clear areas of thinking around comic books: firstly, that comic books are considered to be a medium of children's entertainment, and not associated with educational practice; secondly, that when the medium is employed in education, it should primarily be used with students that require extra support; and thirdly that comic books represent a 'missed opportunity in education' and have not achieved their full potential due to a lack of comic book resources for use in the classroom. All three concepts are discussed in light of research evidence supporting the use of comics in educational contexts and concerns are highlighted that suggest these themes might represent a barrier to the future use of comics in these areas. Further qualitative and quantitative research to expand these initial findings is also suggested.

Introduction

Academic interest in the concept of using comics in education dates to at least the 1940s. Hutchinson (1949), for example, reported a study of teacher attitudes towards the use of comics in schools which had largely favourable results. Over the intervening decades several authors have published papers and studies suggesting the possibilities of using comics in educational settings. These include using comics to enhance and support lessons (see for e.g. Burns, 1999; Snyder, 1997; Brooks, 1977; Aleixo & Norris, 2007; Millard & Marsh, 2001; Sabbah, Masood & Iranmanesh, 2013; Syma & Weiner, 2013) as well as suggestions that comics could be used for educational support for those with learning difficulties (e.g. Aleixo & Norris, 2007; Hallenbeck, 1976). However, as noted by Coderre (2019), these suggestions may be down to a 'visual ease assumption' which she argues is not empirically justified. In addition, a number of bespoke comics have been created to teach specific parts of the curriculum (see Aleixo & Norris, 2010).

While empirical research into the use of comic books to directly teach is limited, a small body of work has suggested that, relative to standard written materials, using comics improves comprehension of and memory for that material (e.g. Hosler & Boomer, 2011; Aleixo & Sumner, 2017). Even when comics are not shown to be superior in this way, they have still been shown to arouse increased interest in students (Mallia, 2007).

Theoretical support for the educational potential of instructional comics also exists in the form of dual-coding theory which proposes that both a visual and a verbal code contribute to cognitive processing and overall comprehension and memorability of textual material (Paivio, 1969, 1971, 1975). Furthermore, Ainsworth (2008) found that multiple representations (including textual and visual components) improved learning in science education. Comics fit dual coding theory and multiple representations well, given that they

incorporate both a visual and a verbal component which interact to produce mental representations.

Despite these promising findings in support of comics being used in educational contexts, research into attitudes of teachers and educators towards the use of comic books in teaching in educational settings is extremely limited. Nevertheless, a number of authors have written in support of comics in education, often with practical suggestions for their incorporation into classroom teaching situations (e.g. Aleixo and Norris, 2007; Syma & Weiner, 2013). Furthermore, there have been some surveys of the use of comics by teachers for specific purposes (e.g. Hutchinson, 1949 and Matuk, Hurwich, Spiegel & Diamond, 2019). Lapp, Wolsey, Fisher and Frey (2012) surveyed teachers using questionnaires on their use and attitude towards comics (specifically 'Graphic Novels') in their classrooms and concluded that there was general support for comics but a lack of their actual use. Together, these disparate approaches, provide a general indication that the use of comic books in education is, to some extent, supported by teachers and educators.

However, the limited research into teachers' attitudes towards the use of comics in classrooms leaves an impoverished understanding about the perceived educational value of comics in these settings. Aleixo and Norris (2007) noted that comics have a poor reputation as appropriate reading materials for children. Millard and Marsh (2001) summarised the negative feelings many have about comics:

"Boys' comics have been thought to promote violence, girls' to induce a sappy passivity based on a preoccupation with domesticity, appearance and dress which denies girls' agency in the adult world". (p.26).

This negative attitude seems to prevail from a public image of comic books as cheap, poorly printed, disposable and possibly harmful. This attitude reached a crescendo in the 1950s in the USA and elsewhere (see for example Barker, 1989 and Hadju, 2008) where comics were associated with increases in delinquency levels (see Wertham, 1954). While no evidence has yet been found to support this association, this negative image of comics seems to have persisted throughout the ensuing years. Therefore, these negative attitudes towards comics may hinder their adoption into educational settings regardless of seemingly promising research into their efficacy (e.g. Hosler & Boomer, 2011; Aleixo & Sumner, 2017).

The present small scale study begins to address this gap in knowledge by undertaking an exploratory qualitative analysis of teacher's views towards the use of comics in education.

Method

Participants

Three qualified, experienced, teachers from a secondary school in the United Kingdom (specifically in the South Yorkshire area of the North of England) were recruited via email. The school had a predominantly white population of students from a wide range of socioeconomic backgrounds. The participants' specialist teaching subjects were English (Participant 1), Mathematics (Participant 2), and History (Participant 3) and two held additional administrative positions as deputy head of the school (Participant 2) and the head of the humanities department (Participant 3). Participants 2 and 3 were comic book readers whilst Participant 1 was not. Only Participant 3 currently made use of comic books in their teaching. Participants 2 and 3 were male while Participant 1 was female. Two Participants were aged 42 years and one 36 years. The school library had a small

comics/graphic novel collection but no specific expertise in comics in the library staff was noted.

Procedure

The interviews were conducted in a semi structured fashion by the same male researcher. Questions on the interview schedule were open ended allowing the participants to fully explain their views. Participants were encouraged to elaborate on their answers to provide a rich and detailed account of their views on the use of comics as educational tools within the classroom. All interviews were conducted one-to-one in either the teacher's usual classroom or office. Upon completion of the interviews, participants were verbally debriefed and invited to ask any questions they had regarding the research. All interviews were anonymized and recorded directly onto the researcher's password protected computer. These were then transferred onto an encrypted external hard drive, which could only be accessed through the researcher's computer.

Following the interviews, a full transcription of all data was undertaken. A thematic analysis was employed which involved an initial process of reading and re-reading the data. Subsequently, a dual process of top down and bottom up coding was undertaken to identify both semantic and latent features of the data that variously revealed participants' explicit and implicit views towards comic books and their use in education.

Results

Three distinctive themes were identified through the process of analysis. The first theme conceptualised comic books as, predominantly, a medium of children's entertainment, and not associated with educational practice. The second theme promoted a belief that the utility of comics in education, is primarily to aid students that require extra

support. The third theme dealt with the possibility that comic books might represent a 'missed opportunity in education' and have not achieved their full pedagogical potential.

Theme 1 - Comic Books are for the Entertainment of Children

This theme reflects long held societal assumptions that categorise comic books primarily as a form of children's entertainment. Consequently, this positions comic books outside of mainstream educational practice. This is reflected across a variety of the participant's utterances which categorise comic books and graphic novels predominantly as sites of children's humour or superhero stories. Furthermore, comics are deemed to typically appeal to a narrow sub-set of children who are more immersed in popular culture.

This theme of comics as sites of childhood entertainment featured in responses from all participants. Moreover, participants often linked comics to their own childhood and how they stopped, or at least reduced, reading comics later in life. Participant 3, who was the most experienced comic book reader amongst the interviewees, notably referred to his own childhood experiences as the most prominent source of his knowledge of comic books.

Extract 1

'Yes yeah for (.) so (.) as when I was younger I read an awful lot occasionally now (.) I will (.) pick up the odd one erm that takes my takes my interest (.) erm it ah yeah theres the erm (.) so (.) personally going right back I I started off with all the classics you know your Beanos your Dandies'. (*Participant 3*)

A similar initial association of the comic book medium to childhood can be seen in Participant 1's response to being asked what she understands by the term comic book:

Extract 2

'I think my perception's probably changed (.) errrm you think (.) in traditional sense and you think of things like Beano (.) and Dandy the things you grow up with (.) errm so that idea that they're purely for entertainment (.) errm but then you also get exposed to things like anime(.) that kids talk to you about erm(.) and how graphic novels I still think fall under that genre.' (*Participant 1*).

Participant 1 also specifically mentions that comics are for entertainment purposes. Both of these participants also associate comics with 'The Beano' and 'The Dandy', both long running publications in the U.K devoted to children's humour, both feature black line cartooning and both publications are marketed at children. It is worth noting that both publications are known to have dominated the market in comics in the U.K. for many decades and as such are likely to have cemented the understanding of comics for many individuals growing up in this country.

Further to this theme, is the idea that comics are read by a specific sub-set of children. This sub-culture is what Participant 2 refers to as a 'geek' subculture:

Extract 3

'I kind of go through phases so in the summer holidays I read quite a lot last (.) last summer (.) I read err a lot of Batman oness ((laugh)) err Superman ones I I kind of everything Walking Dead I (.) I kept up to date with those there's a hundred and fifty odd of those at the moment erm

There's quite a lot of new ones (.) the Star Wars ones I'm a bit bit of a (.) na I'm not a massive geek but I do go through phases'. (*Participant 2*).

This response also shows a general association of comics with superheroes, although the inclusion of two non-superhero titles also suggests the acknowledgement of the broader scope of the medium. This association is continued by Participant 2 in describing his use of comics in the classroom (although here, perhaps paradoxically, it is noted that superheroes do not totally equate with comics):

Extract 4

'I I really like comics I like the idea of using it if I could I haven't really (.) I mean I do (.) I use comic characters so I do erm I'm trying to think of one I did recently I did a an activity that involved (.) superheroes and villains (.) and its not really (.) to do with comics just more the characters cause the kids recognise them but then there's erm its like a kind of to (.) almost top trumps thing (.) and they have to solve (.) well you can do it for anything they...'. (*Participant 2*).

In another comment, Participant 3 specifically refers to comics as having belonged to a subculture that was regarded negatively but makes the point that this may be changing:

Extract 5

'I used to love them and it was just the whole world was it was just a it was just a (.) it's just a very (.) a very oh a a very sort of ohh a very little a little world that well it used be very much a it's own little subculture (.) that was very much looked down upon (.) however now I think its changed a lot I think and its a lot more (.) open and

accessible and and very different to how it used to be when I was I was younger'

(Participant 3).

Furthering the point regarding comics as a subculture pastime, Participant 3 also suggests that comic books, interestingly made distinct from graphic novels, are not overtly present in schools suggesting a generational gap in seeking out forms of entertainment. Arguably, this also supports the idea that the comic book's geek subculture status makes it undesirable public reading material.

Extract 6

'the modern generation is different y'know they're (.) they're erm (.) they're much more s s s social media savvy y'know that's where they they look for their content their entertainment so I I'm there are still some (.) that read them (.) but I I don't know about the comic book as much anymore I think the graphic novel (.) they they I've seen (.) students reading but I'm not sure about the regular sort (.) of weekly monthly comic thing or' *(Participant 3).*

Participant 1 presents similar ideas about the educational validity of comic books and also refers to 'graphic novels' as possibly more acceptable forms. This extract is a response to the question of whether there is a reason why Participant 1 has never read a graphic novel:

Extract 7

'I don't ((sigh)) I think probably jusst ough its to do with I suppose the canon of what's acceptable to read as well isn't it and I think y (.) you could ask anyone who wasn't a teacher (.) and they may well say oh yeah I read graphic novels I think there's almost

a (.) subliminal expectation that I will read things that are more academic more conventional I suppose (.) erm and so no perhaps I ought to' (*Participant 1*).

This extract also suggests that there is a 'canon' of acceptable reading material and that comics may not fall into this. Participant 1 expands on this:

Extract 8

'it's like I said earlier about this canon of literature this idea that there are things we should read (.) not necessarily things we shouldn't (.) but the idea that there's things we we're pushed in the direction of (.) if you want to succeed you read these things and so I think there is (.) not a st stigma, stigma's too strong a word but I think there is is idea of there being a hierarchy andnd (.) I think that might put some students off as well as (.) potentially (.) adults as well' (*Participant 1*).

In total, these extracts suggest amongst the participants that comics are seen firstly as an entertainment medium, which is associated with certain content such as cartoons, humour and superheroes and primarily aimed at children. Furthermore, the content of comics appeals to a sub-culture of children. There are also several suggestions of participants outgrowing their interest in comics and also an implication that comics are not acceptable reading materials within an educational context. There is also some suggestion that comics may be becoming more acceptable, especially if they are considered 'graphic novels'.

Theme 2 – Comics are for lower ability Students

The second theme was complementary to the first in that it suggests in educational settings comics are primarily perceived as a resource reserved for atypical, struggling or

lower level students. This theme centres on the notion that these students need more stimulation than other students to stay focused. Stimulation is a trait often attributed to comic books given their dual, pictorial and verbal format. References are also made to comic books presenting information in a simplistic fashion and subsequently questions are raised regarding the perceived level of difficulty and therefore the relevance and suitability of the comic book format for students in mainstream educational settings as opposed to their employment with lower ability students. Again, there is an interesting point surrounding the differentiation between graphic novels and comic books in terms of the simplicity of comic books and the complexity of graphic novels.

The following extract is Participant 1's response to being asked to elaborate on the idea of using comic books with 'some students'.

Extract 9

'I do think probably in the same way I (.) I and others think that (.)ooh (.) I'm not sure its challenging enough to look at something like that I think somme students might feel the same (.) this idea of (.) this isn't gonna push me as much as (.)' (*Participant 1*).

This extract exemplifies the attitude that comic books' educational value is restricted to lower ability students and displaying the attitude that comics are inherently simplistic. The suggestion that comic books may not 'push' students denotes their perceived simplicity, arguably alluding to the wider societal dismissal of comic books as childish as discussed in the previous theme.

The notion that comic books are simplistic can also be seen clearly when Participant 1 makes explicit reference to the simplicity and 'childlike' elements of comic books:

Extract 10

'graphic novels I still think fall under that genre as well and a graphic novel in itsss the connotations of a graphic novel are much morre flattering to the form I think than a comic a the the (.) idea of a comic (.) suggests something quite child like (.) quite simple' (*Participant 1*).

Here, the participant is answering the question of what she understands by the term comic book. This extract presents the participant's explicit view that she considers comics to be 'child like' and 'simple' and there is the implication that they can only be a low level resource in her teaching. Interestingly, the participant distinguishes between graphic novels and comic books, suggesting that the term 'graphic novel' lends some credibility to the format, but still constructs them under the 'childlike and simple' umbrella. This latter point further implies that comic books are considered to be a low level resource.

Participant 2 demonstrates evidence for this theme in his account of his consideration of the use of a comic book to 'help struggling students understand autism' (the name of the area has been removed to protect the school's anonymity).

Extract 11

'That's a thaa not really there was something I came across the other day (.) he was to do with tryнна explain autism (.) and it wasn't a (.) it wasn't particularly thick (.) erm (.) it was a fairly short (.) only a few pages but it was presented (.) as a kind of comic style I thought it was quite interesting to (.) to use that (.) with (.) with some children that were struggling to understand what autism was and where they fit on it

an (.) erm (.) I was going to (.) I was gonna (.) it's a freely available thing so I was gonna print it off and (.) possibly suggest that we use it with some (.) so (.) so:me of the kids upstairs who struggle a bit in the er (.) in the **** area so...' (*Participant 2*).

It is interesting to note that, apart from the previous account of using comic superhero characters, this extract represents Participant 2's only account of even potentially using comic books in an educational setting. This extract typifies this theme which limits the potential use of comic books in education, and categorises them primarily as a tool to aid students with lower educational abilities. This suggestion supports the idea that comic books are considered to be a limited educational resource, and similarly complements the suggestion that comic books are reserved for use outside of mainstream educational practice.

The idea of comic books only being useful with a minority of students is again present when another participant discusses the only time she has ever used a comic book in her educational practice.

Extract 12

'when I had er a lower er ability group I read er (.) a sort of comic version of romeo and juliet erm and I did use it with my class erm and I think that's sometimes a bit of a pit fall is this idea that its a way to engage (.) less able cause I do think(.) more able kids could get a lot from it as well the visual (.) stimulus (.) as well as the less able but yeah' (*Participant 1*).

This extract presents the participant's only account of using comic books in education. It is worth noting that comic or manga versions of Shakespeare plays are, in all

likelihood, the most prominent use of comic book material in secondary classrooms.

However, she also states that the comic resource would have been useful to engage more able classes but that she sees some reticence to do so because of pre-existing attitudes that comic books can only be used with less able students.

Theme 3 - A Missed Opportunity/Lack of suitable resources

The final theme that became apparent was the perception of comic books presenting a missed opportunity for teaching. Participants demonstrated an awareness of their effectiveness in different forms of education and where comic books could potentially be applied given better resources. The extract below exemplifies this theme.

Extract 13

'so it so it seems (.)almost like there is a missed opportunity I think cause I mean it's what I've just done with the 12's now were looking at a poem (0.3) and I know its a poem with lots of (.) that a lot of artists have interpreted (.) visually (.) and so I get them to go away and choose an image (.) that they think represents the poem really well (.) and talk about that (.) and so it's exactly the same principle of of (.) kids are stimulated by the written word but also by (.) the visual and so it seems that there is a I it's not something I've come across this kind of ready resource (.) which is a shame' (*Participant 1*).

This extract denotes the participant's belief that comic books have a place in education and reflects some interesting ideas about the potential practical application for comic books. However, he also notes the lack of resources for teacher's to support the use of comics.

Participants also indicate a further potential benefit of using comic books in education, whereby comic books offer a means of engaging popular culture resources as teaching tools:

Extract 14

'You know (.) you always (.) the way of modern teaching (.) is that you're always competing with erm with (.) influences that are far more attention grabbing (.) than a traditional textbook (.) or (.) so you are always looking for something that will help hook a student or (.) just (.) bring a bit more interest so any anything that is so yeah comic books have got as much (.) uh there's room for comic books i in a a lesson just as much as as (.) an excerpt from a film or a documentary they are as (.) as useful tool providing they y'know they (.) they're well researched and they fit what you're trying to cover [yeah]' (*Participant 3*).

This extract illustrates an awareness of the opportunity presented by comic books and how they might be best employed, which is as supplemental teaching materials.

Participant 2 echoes this sentiment with comments regarding the resource's novelty and ability to garner attention from students:

Extract 15

'I suspect (.) some of the more difficult kids would ((phew phew)) flick through things fairly quickly but at least you're getting their attention and I think (.) its not too daunting (.) the idea (.) I think that a what I would like about something like that is (.) there's not there's never too much on a single page (.) and then (.) that doesn't overwhelm' (*Participant 2*).

Despite the allusion to simplicity, the participant highlights positive elements of using comic books to promote engagement. The participant even refers to the usually denigrated simplicity of comics as a positive element, suggesting that a comic book resource 'doesn't overwhelm' and hence supporting the concept that comic book resources are capable of making difficult information easier to understand.

As well as the explanation of the benefits and potential of comic books in teaching, all participants, explicitly referred to an open mindedness towards using comic books in the classroom. This was expected, given previous research into attitudes towards using comic books in education, to reiterate however, only one participant used any kind of comic book resource in their teaching practice.

Extract 16

'I would be happy to use it a and I suspect that's not (.) typical I mean a lot of teachers here prob (.) might turn around and say mm (.) don't see how you do that (.) I suppose the challenge is (.) ba I I don't care what I use so long as it benefits and if it gets interest o:r (.) it promotes something (.)' (*Participant 2*).

Here Participant 2 is clear on the position that he would be happy to use the medium in his educational practice despite some perceived difficulties in his colleagues doing the same. Participant 1 may have echoed this sentiment indirectly through comments regarding the lack of readily available comic book style resources in educational practice:

Extract 17

'to my knowledge (.) you know you get sent every now and again sort of what (.) publishers are producing and things like that and (1) there's a marked lack of (1.5) things like that that are m (.) made explicitly (.) available I think (.) errm (.) you have your conventional (.) I think it's CGP they're called [...] its like a revision guide and the back they have a double page cartoon of of mice and men or something (.) and so you have things like that but that's as close as you'd ever get (.)' (*Participant 1*).

These extracts highlight a significant barrier in using comic books in education, namely a lack of quality resources which utilise the format that are available to educators.

Extract 18

'... so I would think y'know (.) bringing in comic books some kids'd really love that kind of thing or (.) I think the worry for me is that its' not exc (.) if you bring it in and it's not interesting in a way that (.) it looks like it's gonna oohh this is exciting this looks good and then you open it up and its like y'know (.) really boring text and the (.) an uninteresting storyline or whatever that's the challenge isn't it to make it something (.) that's educational but also erm (.) interesting enough (.) cause y you can't compete it's like computer games you get (.) computer games that (.) help you with maths (.) basic maths stuff and they're (.) they're rubbish y y you're chasing round a rocket shooting a number that's the answer to 5 times 6 or something (.)...' (*Participant 2*).

Here, the main issue is one of a lack of quality resources, which is clearly explained. The participant's comments regarding how 'interesting' such a resource might be points entirely towards questions of quality and suggests that the idea of using comic books is not the issue but that the standard of current potential resources is low. The

missed opportunity then presents itself in terms of creating fully realized quality resources that are made available to teachers.

Finally, the lacking resources aspect of this theme is furthered by Participant 3, who currently uses a comic book and comic book extracts in his educational practice.

Extract 19

'I think its (.) it will only ever be (.) one small part of (.) erm (.) a topic erm mainly because its its hard to find things that fit so well erm (.) but (.) as used part of (.) er so this is obviously on the First World War so used part of a first world war topic (.) that provides a (.) perfect focus on the life of a British soldier y'know wha w and I think used in conjunction with other (.) erm materials and other styles (.) its excellent (.) it works really well yeah'.

Again, the participant demonstrates the lack of available ready resources as a barrier, whilst indicating his positivity towards the potential benefit of integrating comic books in the classroom. It should be noted that this latter reference is to the comic book that he currently uses. The reference to what the comic book conveys well is of particular interest. As he suggests, the comic book provides a 'perfect focus on the life of a British soldier' suggesting access to intricacies otherwise unavailable in other resources. However, whilst knowing details of the actual comic the participant used in his teaching may help contextualise his comments, unfortunately, the details of the actual source could not be ascertained from him.

In addition, while the lack of resources available to teachers is a problem repeated by all three participants, it seems likely that this represents both a lack of knowledge of which

comics might be useful in classrooms settings as well as a lack of teacher style resources, such as lesson plans.

Discussion/Conclusion

The results of this exploratory study suggested that teacher attitudes towards using comics in educational settings fall into three broad categories: firstly that comics are for children; secondly that if used in education, comics are for lower ability pupils; and thirdly that there are no readily available, quality resources, that teachers can easily employ.

While, as previously noted, there are currently no directly comparable studies that have carried out similar investigations, all three of these themes are broadly in-line with similar previous research.

Theme 1, and to some extent by Theme 2, reflect the general poor reputation of the comic book medium, as well as its association with material predominantly aimed at young children (see for example Aleixo & Norris, 2007). This is hardly a surprising finding given, as discussed earlier, the history of poor views about comics generally (e.g. Barker, 1989 and Hadju, 2008) . This also represents the common conflation of the medium of comics (in other words of using pictures and words in a sequence to tell a narrative event) with the general perceived child-based content of comics (especially in the US and UK). Comics also have a reputation of being poorly produced, simplistic and disposable (e.g. see Millard & Marsh, 2001). These ideas are clearly reflected in the participants' responses where comics were inextricably linked to these attitudes regardless of any potential in teaching situations. However, there were also some suggestions from Theme 3 that despite these limitations, comics could still, and perhaps should, be used in schools.

Theme 3 also supports the previous surveys where teachers are found to be generally supportive of comics in schools but their actual use is very limited (e.g. see Lapp, Wolsey, Fisher and Frey (2012)). The theme therefore represents a seemingly positive attitude toward the use of comic books in education, despite actual use often being very low. The results of the present study further highlight that one reason for this lack of use may be down to a perceived lack of available resources both in terms of which existing comics to use as well as resources to help employ comics in a teacher's pedagogical arsenal

Taken together, these three themes reflect somewhat contradictory views from teachers. On the one hand there is a positive view towards the potential use of comics even though the participants reported a lack of suitable resources in order to be able to fully use comics to their potential, On the other hand, there is a tendency to see comic books as overtly childish and therefore not suited to educational settings, or to limit the potential use of comics to particular student groups. The assumption here being that comics might be a suitable tool for students of lower abilities. We note, that not only does this diminish the educational potential of comic books for students of higher abilities, it also implicitly infantilises those of lower abilities, assuming that students with lower intellectual capacity will benefit from teaching aids that are deemed to be childish. This finding may also reflect (and extend) Coderre's (2019) 'visual ease assumption', whereby these participants also assume that the visual elements of comic books make the issues simpler and more understandable, therefore more suitable to those of lower ability.

Identifying a contradictory, and yet interlinking narrative is typical in qualitative analyses of this kind. Drawing together the three themes it becomes apparent that these teachers believe comics could provide useful aids to increasing motivation or engagement with students. Whilst this is encouraging, participants assessment of the potential of comics

appears restricted to important but limited aspects of the learning process. Namely, comic books are seen as only being useful in a motivational sense or in order to explain basic concepts to less able students.

Whilst there is a clear need for further research to expand these findings, we suggest that the current findings reflect barriers to a more extensive use of comics in educational contexts. Therefore it may be that the potential of educational comics can only be realised if these barriers can be overcome. This is especially the case if comic book educational material is proposed for use with those more able students or in educational situations that are not simply motivational or somehow a 'stepping stone' to using more conventional materials. Interestingly, the participants' separation of 'graphic novels' from comics and ascribing to the latter more positive attitudes, might mean that this issue may be (at least partly) down to the term 'comics' and not necessarily to the medium itself.

The present findings are, of course, limited, being from an exploratory study with minimal participants drawn from a single school. Hence, this study is only a first step in understanding and addressing the barriers which may impact on the current engagement of comic books in education. Nevertheless the participant's responses were detailed and extensive and the findings align with, and compliment previous work, thus it would not be unreasonable to assume that they are at least partly representative of wider views.

Further research into teacher attitudes of educational comics, needs to expand on the current findings by conducting additional qualitative research using the categories found herein to develop more focused interview questions that can be used to collect more extensive data. Qualitative research should also be supplemented with quantitative, large scale, surveys using attitude questionnaires specifically constructed to measure the issues

and areas identified by the qualitative work. Allied to this, further focused work needs to be carried out in identifying and developing teaching resources employing comics and making these widely accessible to teachers.

Despite the present study's limitations and its exploratory nature, it is one of the first to find that teachers have both positive and negative views of the use of comic books in education. Previous research has tended to find that teachers are generally positive towards their use. However, it appears that this positivity is not without exceptions and that more nuanced and subtle views are more likely to be presented by teachers and that any research informed attempts to include more comic based educational material in schools may be limited by these views.

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