Dear Hon Clark Tribesmen,

Let’s use this to track what we have and have not posted to the debate.

Table 1: The Media debate: Richard Clarke Tribe

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| ARG# Identifies a message that presents one and only one argument or reason  that supports that media influence the learning process or not. The  arguments are numbered | EXPL Identifies a reply/message that provides additional support, explanation,  clarification, elaboration of an argument or challenge | BUT Identifies a reply/message that questions or challenges the merits, logic,  relevancy, validity, accuracy or plausibility of a presented argument (ARG)  or challenge (BUT). | EVID Identifies a reply/message that provides poof or evidence to establish the  validity of an argument or challenge |
| ARG 1- POSTED  Media do not influence learning under any condition, but curriculum reform does (Clark, 1983, p. 445).  Volunteer Mishack | POSTED A computer might present learning content audio-visually in attractive and speedy ways, but that may not mean that this technologically assisted way of learning translates into improved learning performance. The argument put forth by Clark (1983, p.445), using the analogy of a vehicle, is that: "The best current evidence is that media are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition.  NOT POSTED  Basically, the choice of vehicle might influence the cost or extent of distributing instruction, but only the content of the vehicle can influence achievement". (we may find this second EMPL valuable in another argument)  Volunteer | Kozma (1991) rebuts saying the “processing capabilities of certain media can modify and refine the dynamic properties of learners’ mental models” (p.3)  Volunteer | Clark (1983) anchors his arguments on Lumsdaine (1963) who reviewed studies in defence of media's enhancing of learning.  Lumsdaine refuted such studies based on factors such as methodological flaws and focus. For example, in studies that compared the effects of different step size in programmed instruction via TV, it was found that it was step size, not TV, which was the focus of the studies.  Volunteer |
| Current summaries and meta-analyses of media comparison studies clearly suggest that media do not influence learning under any conditions.  Clark (  Volunteer Ester (?) | The case with television in El Salvador (Schramm, 1977), it was not the medium that caused the change but rather a curricular reform that accompanied the change. | Even in the few cases where dramatic changes in achievement or ability have followed the introduction of a medium. | 1. Curriculum changes caused the impact/change in learning. Clark (1983) provides consistent evidence for the generalization that there are no learning benefits to be gained from employing any specific medium to deliver instruction. In other words, media are mere vehicles that deliver instruction but do not influence student achievement.  2. Carter (1996) basically says that most DE educators support Clark’s view. While he suggests that distance educators must do more research on new educational technologies, he also says in his conclusion that Clark’s stance “is inarguable” (p.37) |
| ARG 2 POSTED  According to Clark (1994, p. 24), "there is a compelling research evidence that students' beliefs about their chances to learn from any given media are different for different students and for the same students at different times".  Volunteer Mishack | Clark s(1983) says that a rival to the Kulik, Kulik & Cohen research is that the increased learning is the result of increased effort in the creation/presentation of the new media and that the same effort applied to conventional instruction would yield the same results. (Clark, 1983, p.449.)  In Carter (1996) referring to Verduin and Clark (1991), comparisons in improvement were done more between live classroom and distance than truly media or media attributes. | Studies demonstrate time savings resulting from certain media. C. Kulik, Kulik & Cohen (1980) found 30 to 50 percent reductions in time required to complete lessons with computers over classroom. (In Clark, 1983)  Attention aka research has been focused on media’s “efficiencies and effectiveness associated with factors such as time, cost, and availability (Holmberg, 1981 in Carter, 1996, p.31.)) | This suggests that multimedia cannot on its own be suitable for students' learning. For multimedia to be effective there must be an instructional method. It is method, not multimedia, that counts for learning. Clark (1994) states that Kozma agrees with him. (Clark) that in the past 70 years there has not been a compelling research (published or unpublished research) that media cause learning increases under any conditions. (EVID1). Carter (1996) states that Kozma concedes that “studies comparing the effects of media have been inconclusive and flawed” (Kozma, 1994) |
| ARG 5 (Is this part of ARG 2?) POSTED w/2 above  Educators, researchers and students have an overwhelming desire to leverage technology and media to do more, integrate more and certainly to improve teaching and learning. But the research does not yet support the improvement  Volunteer Teri | Clark, on page 456, states "It is what the teacher does - the teaching - that influences learning". This is also discussed on page 448 when Clark references C. Kulik, Kulik, & Cohen, whose 1980 research concluded that the improved affect of learning afforded by media goes away when the content/media being researched are delivered by the same individual, supporting the view that the teacher is the common denominator of success. | Some studies – need to pull citations – do show improvement.  Kozma rebuttal (needs more data) This is also the issue, also discussed at length by Kozma (1985) of the novice v. the experienced learner and which might benefit from the use of media in learning and which might be harmed.  Carter (1996) while acknowledging that distance educators for the most part agree with Clark says that current research is “limited and mired in the conventional” (p.37).  In Carter (1996), “designers were absorbed in the logistics of technology rather than design considerations” (p.34.) | In progress – students try harder because they fervently want the new media to make the difference.  The stated advantages discussed by Clark include Lumsdaine's (1963) research that media might allow for the cost-effective scalability or instruction (Clark, 1983, p. 446); that the novelty of media might initially improve results as students strive to take advantage of it; that the additional effort put into course design involving media can positively impact a student's (given that the same level of effort in a conventional course might produce the same effect). |
| ARG 3  There is no valid empirical evidence to the effect that media influences learning  Volunteer Esther | It seems that similar research questions have resulted in similar and ambiguous data. Media comparison studies, regardless of the media employed, tend to result in "no significant difference" conclusions (Mielke, 1968). These findings were incorrectly offered as evidence that different media were "equally effective" as conventional means in promoting learning, thereby elucidating uncontrollable effects of research methodological approaches. | This is a methodological problem arising out of improper research questions in the studies conducted.  Teri to Ester, were you thinking that the BUT in your example ties to Kozma (1994) saying that the failure to establish a relationship between media and learning has to do with the behaviorist past of education and the fact that "theories, research, designs" (p.8) and limits our ability to accurately identify and document the relationship?  Kozma (1994) states that the discussion needs to be reframed from the current to the future of will it influence. Clark can’t say it does not since we have not yet made the relationship. | An example is that of meta analyses. There is evidence in the meta-analyses that it is the method of instruction that leads more directly and powerfully to learning. Glaser (1976) defines instructional methods as "the conditions which can be implemented to foster the acquisition of competence" (p. 1). It seems not to be media but variables such as instructional methods that foster learning. |
| ARG 4 Invalid research methods  Volunteer Esther | Research studies are affected by confounding. We need some examples here.  Uncontrolled method and content effects(Clark, 1983, p.448) | Kozma BUT in 1994 p 16 under Implications for Practice | In Carter (1996), Clark’s position is that research has been confounded by delivery technology being confused with or interchanged with instructional technology (p.31) |
|  |  |  |  |
| ARG 5  According to Clark (1994), media and their attributes can have influence on cost or swiftness of learning, but only the use of satisfactory teaching methods will influence student learning.  Phyllis | Educational institutions continue to devote many dollars towards media purchases with the belief that this will provide learning gains. If there are advances in learning, media is given the credit for the gain. In reality, the credit should be given to the instruction as the dynamic component. The learning that occurs is a result of the teaching that is rooted in the media presentation. When there are no learning gains, it’s assumed that the media mix was wrong. (Clark, 1994). EXPL.  Also, that if no single media attribute has the unique cognitive effect then some other variable must be responsible for the learning gain (Clark, 1994)  Phyllis Drum | Kozma (1994)cites the Thinkertools project, stating that computers in this project were used to “perform or model operations that learners had difficulty providing for themselves.” (p.13)  Kozma (1994) also says that researchers looking for a desirable effect should be concerned with conditions that are sufficient to bring about the desired effect rather than necessary to (p. 14) | Clark argues that there is evidence that suggests no educational benefits are gained from using different media in learning. Clark’s view is that studies have indicated that confounding has added to the studies crediting the learning to media, but that the preponderance of the studies do not provide any significant differences. (Clark, 1983, 1994)). EVID  Carter (1996) refers to Evans and Nation saying that “pedagogy and technology are..fundamental and inseparable elements of education” (p.37) but they do not say that technology (media) improve learning. Could also use the Walker statement in the first paragraph on page 37 of Carter here.  Phyllis Drum |
| ARG 6 –  According to R.E. Clark “there is no single media attribute that serves a unique cognitive effect for some learning task, the attributes must be proxies for some other variables that are instrumental in learning gains.” (Clark, 1994)  Frances Kla-Williams | The method or medium we use has changed over the years; however, what the teacher is presenting has not changed and has remained constant. Clark's position is that the choice of media is irrelevant to the effectiveness of instruction. | The 21st century has brought about new technology, which has led to a new way of how teachers teach and what students learn.  We need a Kozma challenge here. Is it Kozma’s (1991;1994) point that method and media are connected? (p.31 of Carter)  Kozma (1994) that Clark forces an unnatural “schism between medium method” (p.29) | The “replaceability challenge”, which is critical to Clark’s position, asks the question, of whether other media or another set of media attributes that would yield similar learning gains. (Carter, 1996) |
| ARG 7  According to Clark, he’ll accept that when learning occurs, a mix of media must be present to deliver instruction.  Phyllis Drum | If learning takes place because of the exposure to media, the **learning is due to the instructional method embedded in the media presentation**.  Phyllis Drum | Kozma rebuttal?  “In good design, a medium’s capabilities enable methods and the methods that are used take advantage of these capabilities (p.16.)  Clark’s research does not take into account the significant changes in media capability since Clark’s initial articles (Kozma, 1994, p.17) | All methods for learning can be delivered by a plethora of media, it’s the instructional method that is the active ingredient. It may or may not be influenced by the medium. While it is important to identify the necessary methods for learner and tasks, it’s also important to use media that are able to deliver learning for the least expense.  Phyllis Drum  Despite the argument that media simply helps out with learning, Mayer (2002) emphasizes research that demonstrates that the media itself does not affect how the learner is processing the content, noting that:  "Current research in cognitive psychology paints a quite different view of how the human mind works (Bransford et al., 1999; Lambert 81 McCombs, 1998 ; Mayer, 2 00 3b)" (p.3).  Processing pictures, spoken words, and printed words (Mayer, 2002)  As Mayer's (2002) diagram above demonstrates, the mind does not gain more information by being exposed to more information.  Rather, the information is channelled through different processes, focusing on one information at a time.  Reference:  Mayer, R. E. (2002). Multimedia learning. *Psychology of Learning and Motivation*, *41*, 85–139. |
| ARG 8  *Renee Burrell*  *Clark (1993)*  *Bias Research*  Studies hoped to prove that learning will be enhanced with a proper mix of medium, student, subject matter content and learning tasks. Clark (1991) indicates that these studies used “Media Selection” schemes or model to produce bias outcomes. Clark concludes that mos*t* of these models assumed learning benefits from media. | Earlier research that implied media as simple delivery devices were later seen as poorly designed studies that lacked an adequate model or theory. | pending | Rival explanations designating media as having an advantage contains evidence of artifact and confounding, and biased editorial decisions which may favor research showing larger effect sizes for new media.  Lumsdain studies used media as a simple vehicle for instructional methods and sometimed mistakenly interpreted as a benefit from media. Salomon and Clark (1977) called them “research with media” whereas media are mere deliveries for the treatments being examined and not the focus of the study.  In a statistical follow-up to Suppes prior research, Kulik et al. (1980) reviewed 59 computer media-based academic programs to conclude the following:  "Overall, however, the accomplishments of computer-based instruction at the college level must still be considered modest" (p. 15).  A review of more current research on this specific topic does not reveal an improvement on this research.  Reference:  Kulik, J. A., Kulik, C.-L. C., & Cohen, P. A. (1980). Effectiveness of computer-based college teaching: A meta-analysis of findings. *Review of educational research*, *50*(4), 525–544. |
| ARG 9  *Renee Burrell*  *Perception of media affects learning:*  *Clark (1993)*  Students’ perception of the medium and own abilities is related to their learning, not the medium used. Ksobiech (1976) and Salomon (1981). | There is a relationship between the perceived difficulty of a media, the capacity of the students and the effort invested in learning. Salomon (1981) | pending | • Ksobiech (1976) and Salomon (1981) conducted a study to evaluate the behavior of students told lessons were to be evaluated, entertainment or the subject of a test. The test group chose more verbal information to assure success and therefore performed best. Additionally, the students who believed a test would follow applied more effort than the other groups   CLARK EXPL 9: No one media attribute has a cognitive effect   Conceptualization of media attributes in terms of their psycho- logical effects and functions points to a seldom made distinction between research concerned with psychological effects and re- search concerned with instructional effectiveness. The former addresses itself to the information processing activities, mental or emotional states, brought about by different media attributes as they interact with learners' psychological characteristics. Such research is most typically found in the fields of psychology and communication. |
| ARG 10  Dennis Ikpe:  Learning develoment and media characteristic are two independent variables, Clark (1993). | Literature review of research on media comparison spanning five decades suggests that learning benefits and medium of instruction are two independent variables. Uncontrolled effects of instructional methods and novelty shows that the research showing performance gains through the use of media are without solid grounds ,Clark (1993, pp. 450) | However, a literature review by Kozma (1991) indicates a positive correlation coefficient between learning benefit and use of instructional media. It particular, the paper states that media characteristic improves mental transformation | Studies during the 1970s provide eveidence of a connection between media charateristics and instructional design but not with learning development, Clark,(1993). |

Table 2: Kozma Tribe Contradiction views that we expect (We need to prepare to buffer these)

Kindly volunteer to work on these

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| ARG 1 Esther |  |  |  |
| ARG 2 Frances |  |  |  |
| ARG 3There is no relationship between media and learning as we have not yet made it.  Kozma (1994) |  |  |  |
| ARG 4  The capabilities of a particular medium, in conjunction with methods that take advantage of these, interact with and influence the ways learners represent and process information, and may result in more or different learning when one medium is used compared to another, for certain learners and tasks. (Kozma (1991) |  | All caveats: “may result”, for certain tasks”, “for certain learners” |  |
| ARG 5The instructional designer is responsible for using the capabilities of the medium to create “objects that generate …conversations that influence learning” (Kozma, 1994, p.17.) | The important question is not the overall impact of one media versus another (and does it justify the production and expense required) but is about how “micro level design decisions” require the designer to understand the constant communication between the learner and the medium (Kozma, 1994, p.28.) | Kozma (1994) , paraphrasing Clark says that some students will learn regardless of delivery (p. 28.) | Kozma back to Clark’s position is that some students will be able to use a medium to “construct knowledge” (p.28.) |
| ARG 6 “Our ability to take advantage of the power of emerging technologies will depend on the creativity of designers, their ability to exploit the capabilities of the media, and our understanding of the relationship between these capabilities and learning” (Kozma, 1994, p.29). |  |  |  |
| ARG 7 |  |  |  |
| ARG 8 |  |  |  |
| ARG 9 |  |  |  |
| ARG 10  Dennis Ikpe: |  |  |  |

**Carter (1996)**

**Arguments and thread-**

**Assignment #1: Debating Club - The impact of media on learning**

This assignment is based on the so-called "Media Debate" between Richard E. Clark

and Robert B. Kozma on the impact of media on learning. Please find the following

articles under "Reserved Readings" and "Course Content". You should read them in

chronological order:

Clark, R. E. (1983). Reconsidering research on learning from media. *Review*

*of Educational Research, 53*(4), 445-459.

Kozma, R. B. (1991). Learning with media. *Review of Educational Research,*

*61*(2), 179-211

Clark, R. E. (1994). Media will never influence learning. *Educational*

*Technology Research and Development, 42*(2), 34-38.

Kozma, R. B. (1994). Will media influence learning? Reframing the debate.

*Educational Technology Research and Development, 42*(2), 7-19.

Carter, V. (1996). Do media influence learning? Revisiting the debate in the

context of distance education. *Open Learning(1),* 31-40.