

# Testing Engagement for a Syndicated Study – A Title Specific Measure

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## Introduction

As using readership level (counting eyeballs) to differentiate among magazine titles is getting less and less effective for advertisers due to the similarly low level of magazine readership, a lot of attention has recently been given to looking at engagement as an alternative means to identify differentiation and therefore buying and selling of advertising space. Engagement is a very broad concept and could take many directions. There has not been a formal definition of what engagement of a medium should be and no agreed operational parameters developed to collect the appropriate data. A lot of works have been done by media practitioners focusing on how advertising was received by readers, how was it internalized and what impact does the advertising made on the brand choice. Just to name a few, D'Amico (2007) measured engagement by focusing on receptivity to (a) advertising, (b) advertised brand and (c) media vehicle carrying the advertisement. Ware et al. (2007) approached engagement by looking at the congruence between advertising and content. Cools et al. (2013) and Callius et al. (2013) both included the emotional relationship with the media as a concept in their examination of engagement. More inspiring is their use of a love relationship to describe engagement. It is along this "love" theme that we structured our thoughts and approach in this research. Love of a medium or a publication is a mindset that sitting at the highest level. Without the love of the medium or a publication in the first it is unlikely that we are inclined to voluntarily spend more time with it. It is on this hierarchy that we leverage on to build the title specific engagement measure.

## Background

In 2014, an interest in offering magazine engagement measure was spawned by the members of the Canadian magazine readership study). As a result, a quest to develop a methodology without excessively lengthening the existing questionnaire and altering the survey methodology began. The objective was to produce a single score for each title without repeatedly asking respondents identical questions on every title read and over burdening them. We started with reviewing the literature and building a streamlined set of questions that we felt is relevant to capture the essentials. We were cognizant of any imperfections that may exist in working within the confinement of an existing survey methodology and questionnaire. However, we needed to take a pragmatic approach.

## The Data

The Canadian magazine readership study, PMB, used CAPI methodology to collect readership data. It also incorporated a leave-behind booklet questionnaire to collect brands, products and services data. The engagement related questions are included in this leave-behind questionnaire. We collected attitudinal and perception data about magazines and its applicability on the 5 major media type: magazines, newspapers, radio, television and internet. Respondents also rated their level of agreement/disagreement ratings on 22 attitude statements that covered inspirational aspects as well as actions taken as it apply to magazines. These same statements were also asked to indicate whether these 22 attitudinal statements were applicable to each of the media types (the actual statements used can be found in the Appendix).

In the self-complete questionnaire, check boxes were used to collect applicability for each media type as well as for their agreement/disagreement ratings

ATTITUDES TOWARD MEDIA Check as many as apply	AGREE STATEMENT APPLIES TO:				
	Magazines	Newspapers	Radio	Television	Internet
	Often engages me on an emotional level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Challenges me to experience new places and things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often leads me to try new products or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

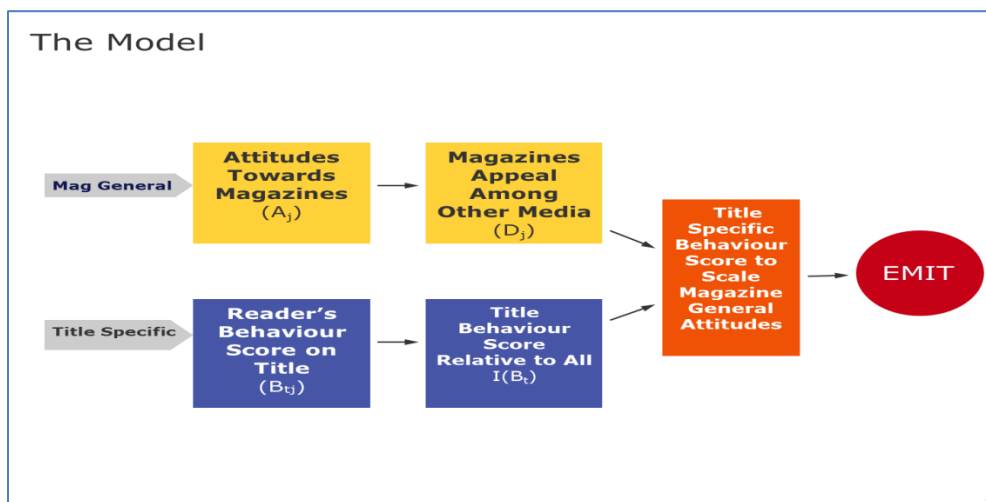
Magazines	AGREEMENT SCALE									
	Strongly Agree									Strongly Disagree
	1	2	3	4	5	6	7	8	9	10
Often engages me on an emotional level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Challenges me to experience new places and things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often leads me to try new products or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In addition, we collected behavioural data from the readers of each title, including :

- i. Number of issues read
- ii. Number of occasions reading last issue
- iii. Amount of time reading last copy
- iv. % of pages usually read

## The Framework

Our framework is built on the premise that magazine engagement is a reflection of consumers' attitudes and emotions towards media in general and specific titles. In another words, engagement of a specific title is a combined effect of how much the person thinks of that media in general and their behaviour in consuming a specific publication. For example, newspapers are usually perceived to be authoritative and trustworthy compared to the internet. This trustworthiness could lead to the positive behaviour of reading newspapers more often versus using the internet for matters that should be based on reliability. The model that we built takes advantage of the notion that consumers have an emotionally predisposition to media which operates at a higher level in their mindset. This mindset translates into differential behaviour when dealing with different titles. The model uses the behavioural characteristics to scale the general attitudes consumers have about magazines to come up with the title-specific engagement measure (EMIT). The model can be graphically described as the linking of the four components.



## Attitudes Towards Magazines

The attitudinal ratings cover various dimensions including inspiration, trustworthiness, life enhancing, social interaction, advertisement attention/receptivity, and resulting actions taken. In order to numerically capture the essence of the 22 statements and give a single attitude score to each respondent, a Factor Analysis was conducted initially on the statements which also helps to remove any redundancy. This analysis uncovered seven factors: Action Taken, Trustworthiness, Inspirational, Life Enhancing, New Information, Redirection, and Influence. From the factor structure, seven factor scores were generated for each respondent so as to condense the 22 statements (summarized in the Appendix). The average of the seven factor scores was used to provide a single measure to represent the respondent attitude towards magazines. We denote this score for the j-th respondent by  $A_j$ .

## Individual Differences on Media Appeal

Respondents may have different point of view on the relative informational and entertainment values of the major media types and a comprehensive engagement measure should factor in the relative appeal of magazines among the competing media. We used the applicability data to the media from the 22 attitudinal statements to serve this magazine differentiation factor.

All of the statements are positively worded, such that the higher the number has greater appeal to that respondent. The sum of each respondent's media applicability was summed (with each medium potentially ranging from 0 to 22 in the sum). This sum was divided by the average of the 5 media aggregated applicability score to produce a single measure of magazine appeal or differentiation at the respondent level. Computationally, it is done as below:

For the j-th respondent,

- $S_M$  = sum of applicable statement given by j on magazine
- $S_N$  = sum of applicable statement given by j on newspaper
- $S_R$  = sum of applicable statement given by j on radio
- $S_T$  = sum of applicable statement given by j on television
- $S_I$  = sum of applicable statement given by j on Internet

Magazine differentiation factor for j is

$$D_j = \frac{S_M}{[(S_M + S_N + S_R + S_T + S_I) / 5]}$$

## Extending Attitudes towards Magazines to Specific Titles

Our theory is that media engagement is a combined product of attitudes and behaviour. In addition to a strong positive opinion of the title, engagement will also increase as more time is spent reading the title. We create a behaviour score for each title and use this behaviour score to scale the overall magazine attitude score to arise at a title-specific score.

For each title, we have collected four levels of behavioural data:

- Relative number of issues read (e.g., three out of four etc.);
- Number of occasions reading last issue;
- Amount of time reading last copy; and
- Percent of pages usually read.

For each title t, the behavioural data was normalized across the readers so that scale differences are removed from the variables as well as eliminating any potential advantages or disadvantages for titles that published more or less often. The four normalized factors were summed to calculate a behavioural score for each reader for each title. For j-th respondent, this is denoted as  $B_{ij}$ .

## Relative Behaviour Index for Title

With the individual title specific behavior score  $B_{ij}$  available, we could summarize it for each title by averaging across the readers and index this average ( $B_i$ ) against the overall average across all titles, which is denoted by  $I(B_i)$ . Notice that this  $I(B_i)$  is the same for every reader of a given title  $t$ .

### **Combining It Altogether**

Our Engagement Media Index (EMIT) is the product of the four computed quantities. Mathematically, for title  $t$ :

Emit score for reader  $j = I(B_i) \times B_{ij} \times D_j \times A_j$

$A_j$  is the reader's overall attitude score towards magazine which is further weighted by the magazine appeal factor  $D_j$  to reflect how this reader feels about magazine in general. This score shows how much "love" the respondent has with the medium.  $B_{ij}$  is the title specific score. It reflects the total amount of involvement with the specific title by the reader. This involvement measure is further adjusted by the relative strength of the title in the market place. This title specific score becomes the additional scaling factor to apply to the medium "love" score to generate the engagement measure for the specific title.

### **Results and Conclusions**

The EMIT score and its components are shown in the table. The AIR is also shown to provide a comparative perspective. It is clear that AIR is not directly correlated with EMIT and therefore engagement. Magazine #526 has the highest AIR but has a below average EMIT score of 13.4. Magazine #504 has a low AIR but a very high EMIT score of 33.8.

Measuring title engagement through a measure such as EMIT offers publications a differential metric to indicate their market appeal. It changes the focus of measuring "success" from the quantitatively based metric of audience estimates/AIR to measuring quality.

This paper is not intended to analyze the individual titles and their relative performance but focuses on the mechanics to generate a comprehensive engagement measure. The EMIT model proposed is practical without introducing lengthy, repetitive and boring questions by each title as other methods do, which should improve the quality of the answers. It also utilizes data already captured - behavioural data on reading - from the readership surveys. In fact, this EMIT measure only requires a short battery of attitudinal statements to be added to the survey. Such an addition should not compromise the main readership study, and its relatively straight forward computation (not "black-boxed"), could strengthen the currencies reported.

The proposed model took a simplistic approach in aggregating the magazine attitude dimensions ( $A_j$ ) and the reading behaviour metrics ( $B_{ij}$ ) by giving equal importance (weight) to their components. Future work could explore the option to introduce differential weighting to bring emphases to components that prove to be more influential in relation to magazine reading engagement.

Callius P., Sandstrom M., Springmann E., (2013) The DNA of the new magazine reader – ORVESTO QRS 2013, Print and Digital Research Forum 2013.

Cools B., Couvreur V., Van Boxem G., Drijvers J. (2013) "They love our title, but do they love your AD?", Print and Digital Research Forum 2013.

D'Amico T. (2007) A new paradigm for measuring engagement, Worldwide Readership Research Symposium 2007

Ware B., Bahary J., Calder B., Malthous E. (2007) The magazine maximizer: a model for leveraging magazine engagement dynamics, Worldwide Readership Research Symposium 2007.

**Engagement Media Index**  
**AIR and EMIT by Magazine Title**

MAGAZINE TITLE	Average					
	AIR	EMIT	Aj	Dj	Btj	I(Btj)
526	12.7%	13.4	5.03	0.61	4.53	0.85
492	10.0%	18.3	5.10	0.67	4.89	0.92
488	9.5%	15.5	4.99	0.57	4.97	0.93
574	9.4%	22.5	5.02	0.61	5.75	1.08
512	8.9%	15.1	4.97	0.57	5.00	0.94
493	8.0%	21.4	5.25	0.71	5.14	0.96
541	7.5%	19.6	5.10	0.65	5.24	0.98
673	7.0%	31.8	5.15	0.66	6.43	1.20
503	5.9%	23.6	5.12	0.63	5.65	1.06
516	5.9%	18.7	5.14	0.58	5.43	1.02
491	5.2%	18.4	5.14	0.71	4.85	0.91
600	4.7%	12.9	4.99	0.60	4.51	0.84
519	4.7%	13.4	4.80	0.54	4.88	0.91
499	4.7%	14.3	5.02	0.60	4.64	0.87
606	4.6%	13.8	4.81	0.50	5.19	0.97
515	4.3%	25.7	4.85	0.64	6.22	1.16
487	4.3%	21.3	5.23	0.70	5.24	0.98
531	4.2%	23.8	5.26	0.74	5.10	0.95
601	4.2%	16.0	5.20	0.68	4.58	0.86
533	3.9%	16.4	5.13	0.63	4.81	0.90
496	3.7%	14.6	4.88	0.54	5.02	0.94
557	3.4%	19.0	4.91	0.63	5.02	0.94
546	3.3%	17.1	5.04	0.53	5.69	1.06
545	3.3%	25.0	4.92	0.59	6.10	1.14
607	3.1%	15.4	4.79	0.49	5.72	1.07
527	3.0%	17.1	4.93	0.59	5.17	0.97
674	2.9%	21.6	5.22	0.72	5.16	0.97
567	2.8%	20.9	4.87	0.58	5.81	1.09
500	2.7%	20.3	5.02	0.67	5.10	0.95
505	2.7%	15.1	4.95	0.56	5.11	0.96
502	2.7%	18.5	5.21	0.72	4.85	0.91
585	2.7%	27.5	5.05	0.61	6.32	1.18
548	2.5%	19.6	4.89	0.59	5.41	1.01
554	2.5%	18.2	5.01	0.64	5.10	0.95
627	2.4%	12.6	4.88	0.63	4.56	0.85
666	2.3%	18.3	5.01	0.62	5.23	0.98
544	2.2%	15.2	5.09	0.58	4.93	0.92
667	2.2%	15.2	5.24	0.64	4.70	0.88
497	2.1%	14.0	5.03	0.68	4.38	0.82
517	2.1%	16.1	4.90	0.56	5.12	0.96
580	2.1%	15.0	4.82	0.60	4.80	0.90
675	2.0%	25.8	5.20	0.69	5.68	1.06
481	2.0%	14.9	4.97	0.65	4.57	0.86
555	2.0%	17.5	4.92	0.64	4.80	0.90
562	2.0%	22.6	4.87	0.74	5.20	0.97

MAGAZINE TITLE	Average					
	AIR	EMIT	Aj	Dj	Btj	I(Btj)
485	2.0%	24.3	5.12	0.57	6.26	1.17
568	1.9%	27.7	5.04	0.68	5.74	1.08
534	1.8%	22.6	5.14	0.60	5.55	1.04
547	1.8%	16.2	4.79	0.55	5.44	1.02
572	1.7%	20.2	4.98	0.60	5.45	1.02
551	1.7%	15.5	4.88	0.61	4.87	0.91
662	1.5%	18.7	5.24	0.67	5.01	0.94
603	1.5%	18.4	4.92	0.73	4.92	0.92
506	1.4%	20.8	5.18	0.70	5.24	0.98
530	1.4%	26.5	5.48	0.68	5.33	1.00
559	1.4%	14.5	4.86	0.52	4.93	0.92
513	1.4%	23.5	4.82	0.62	5.71	1.07
540	1.4%	19.5	5.07	0.66	5.33	1.00
626	1.3%	25.2	5.32	0.75	5.36	1.00
558	1.2%	21.9	5.03	0.71	5.30	0.99
482	1.2%	19.9	5.17	0.59	5.47	1.02
602	1.1%	17.4	5.06	0.60	4.86	0.91
508	1.0%	13.4	4.86	0.52	5.66	1.06
663	0.9%	22.6	5.07	0.70	5.15	0.96
524	0.9%	28.8	4.95	0.53	6.88	1.29
584	0.8%	26.5	4.96	0.67	6.44	1.20
549	0.8%	13.6	4.82	0.47	5.38	1.01
518	0.8%	29.9	4.96	0.59	6.72	1.26
587	0.7%	29.7	5.11	0.52	7.23	1.35
504	0.7%	33.8	5.29	0.73	6.33	1.18
571	0.7%	15.1	4.58	0.44	5.91	1.11
539	0.7%	26.1	5.31	0.88	4.73	0.89
565	0.7%	21.6	4.85	0.66	5.38	1.01
593	0.7%	30.6	5.02	0.71	5.86	1.10
566	0.7%	21.0	4.94	0.67	5.38	1.01
552	0.6%	19.2	4.77	0.52	5.58	1.05
569	0.6%	16.4	5.09	0.66	4.56	0.85
604	0.6%	27.3	4.89	0.69	5.84	1.09
564	0.6%	13.7	5.05	0.63	4.27	0.80
514	0.5%	14.9	4.85	0.53	5.31	0.99
561	0.5%	15.1	4.67	0.56	4.84	0.91
570	0.5%	25.9	5.30	0.68	5.45	1.02
521	0.5%	19.5	4.76	0.49	6.13	1.15
560	0.4%	23.1	5.14	0.64	5.46	1.02
594	0.2%	15.6	4.62	0.56	5.84	1.09
629	0.1%	21.5	5.39	0.45	5.81	1.09
Average	2.7%	19.89	5.01	0.62	5.34	1.00

**Engagement Media Index**  
**Factor Analysis of Attitudes Towards Magazines**

	Factor 1 Action	Factor 2 Trust	Factor 3 Inspiration	Factor 4 Life Enhancing	Factor 5 New Information	Factor 6 Redirect	Factor 7 Influence
11	0.8	0.2	0.2	0.2	0.2	0.1	0.2
21	0.7	0.1	0.1	0.2	0.1	0.6	0.0
20	0.6	0.1	0.2	0.2	0.1	0.6	0.0
5	0.6	0.2	0.2	0.1	0.3	0.1	0.2
7	0.6	0.2	0.1	0.1	0.5	0.2	0.1
17	0.6	0.1	0.6	0.2	0.1	0.2	0.0
8	0.2	0.8	0.1	0.1	0.2	0.1	0.1
13	0.1	0.8	0.1	0.2	0.1	0.0	0.0
2	0.1	0.7	0.1	0.1	0.0	0.1	0.4
10	0.5	0.5	0.2	0.0	0.2	0.1	0.2
18	0.2	0.2	0.8	0.2	0.1	0.2	0.2
12	0.2	0.1	0.6	0.1	0.4	0.1	0.2
19	0.3	0.3	0.5	0.3	0.2	0.3	0.1
15	0.1	0.1	0.1	0.8	0.1	0.1	0.1
14	0.3	0.3	0.0	0.7	0.0	0.0	0.3
16	0.1	0.1	0.4	0.6	0.3	0.2	0.1
6	0.4	0.2	0.2	0.1	0.6	0.1	0.2
4	0.0	0.1	0.2	0.3	0.6	0.2	0.5
9	0.3	0.4	0.3	0.1	0.5	0.2	-0.1
22	0.2	0.1	0.3	0.0	0.2	0.8	0.1
1	0.2	0.2	0.2	0.2	0.1	0.0	0.8
3	0.3	0.4	0.2	0.1	0.1	0.3	0.6