Creation of the United Kingdom Standard Group 2012

For The

Inventory for Work Attitudes and Motivations

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Contents   Page

I.   Introduction

*"The **Inventory for Work Attitude & Motivation** (iWAM) is a questionnaire used for job-related activities, such as recruitment, coaching and training projects. It is based on metaprogrammes, a model of cognitive thinking styles (48 parameters are measured and explained). The iWAM Management Report identifies a person's motivational and attitude preferences in the job context and predicts how this person will behave in various job types, such as administrative, customer contact or managerial tasks."*
(Merlevede P, http://www.jobeq.com/iwam.php)

The Inventory for Work Attitude & Motivation (iWAM) is a questionnaire based on metaprogrammes. These originally emerged in NLP during the 1970s as a result of Richard Bandler's research into coherency in mental programming. Metaprogrammes can be identified as the process which we employ in order to react to a particular situation; for instance, whether we are moving *towards* a goal or *away from* a problem (Dilts & Delozier, 2000).

The iWAM puts these metaprogrammes into a work context and uses them to identify what will motivate specific individuals and how they will behave in a given situation. As we each act according to our own set of internal filters (or metaprogrammes), iWAM has been created in order to identify not only the single ones we use, but also combinations of these factors which may make us more or less suitable for certain job roles.

iWAM has various uses in HR including recruitment, training, coaching and mentoring, team building, and management. Its comprehensive reports appeal to a range of professionals from HR directors to NLP Master Practitioners.

Our culture can play a large role in the filters we use (please see research by Merlevede P, 2004, 2005) therefore the inventory for Work Attitudes and Motivations compares all respondent data to the cultural norm to which they belong. The first UK norm group was created by using respondent data from the start of iWAM to 2001.

The creation of a standard group plus the fact that it is documented has two objectives:
   a) Scientific credibility. Creation of a sample which is representative of the UK white collar population.
   b) To write a paper which helps to promote the iWAM as an effective instrument that compares results to a representative norm group.

Since it has been a significant time since the 2001 norm group was formulated it was deemed important to update the analysis to reflect any changes in UK culture, without reflecting biases that may occur due to large sub sample groups for specific organisations that have had significant numbers of respondents.

JobEQ called for voluntary assistance to create the norm group and The Performance Solution offered to carry out the work. The Performance Solution, with the help of chartered psychologist Sarah Ainsworth, developed and completed this new norm group.

II.   Creation of the Sub-Sample

The starting point for this new norm group was to consider all respondents that had completed iWAM up to the time of this project. However from this total number of respondents an analysis was undertaken to see if any responses could be unrepresentative and to remove these. JobEQ suggests that a questionnaire response where more than 6 questions remain unchanged is not reliable, so all respondents who had failed to change more than 6 questions were discarded from the analysis. This left a total sample of 7117 respondents to iWAM up to the start of this project. From this data, a representative random sub-sample was created. This is referred to further in this paper as the 2012 norm or standard group, or the 2012 group.

The standard group ideally would be a representation of the UK population as a whole. To this end the total sample was compared to the UK Census data 2001 (www.statistics.gov.uk) in order to create a representative sub-sample.

As one would expect for any questionnaire of this type there is missing data for a substantial part of the UK demographic population. This is partly due to the fact that it is predominantly organisations that select iWAM respondents and they tend not to put forward a range of respondents that are truly representative of the breadth of the UK population. Also self registering respondents may not be statistically representative of the whole UK population. This causes an interesting perspective of the iWAM norm group compared to the UK population as a whole. In addition information on demographic representation was also missing from some respondents that did complete the iWAM. As with any missing data it is important to consider why that data is missing, and in this case, we know why the data is missing: the organisation doing the testing is responsible for inputting demographic data about the respondent. Often the organisation is not supplied with this data and therefore leaves it blank. Alternatively, the respondent can input demographic data themselves but this is optional. Respondents may choose not to disclose this data for many reasons including confidentiality, time constraints, etc. It could also be because the respondent simply didn't know the answer to the question (Merlevede P, http://www.jobeq.com/articles/judge_a_psyc_test.php) or that they are deliberately leaving the answer blank for some reason (e.g. Goldberg et al. 1991). These suggestions are merely hypothetical and. The author would suggest that in future, organisations are encouraged to collect demographic data to make the sub-stratification process easier for future standard groups. We could also suggest that the demographic questions are fitted to the Census data so that we can compare the sample more exactly to the UK census, making the Standard group ever more reliable.

Due to the fact that some demographic data was missing, the decision was made to preserve the greatest variation of respondents by creating a random sub-sample, rather than stratifying according to demographic data. This allows us to have a sample that is truly representative of the total UK population who have completed iWAM since it was first launched.

This sub-sample is equal to 1/7th of the original sample size (n=1016) and is representative of the overall iWAM sample. The overall data is included in table 1 to illustrate the suitability of the standard group as representative of the overall UK iWAM population.

Please see table 1 for figures and the Considerations section for further discussion on these points.

III.   The new standard group

The following table 1 illustrates the comparison between the total iWAM sample, the 2012 standard group, and the UK Census 2001 data. See table 1, iWAM samples vs Census comparison.

Table 1: iWAM samples vs. Census Comparison

	Full iWAM sample		UK standard group 2012		2001 Census England and Wales	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Occupation						
Not Specified	3,849	54.1	546	53.7	CATEGORIES FROM THE CENSUS DO NOT COMPARE	
accounting/ finance	128	1.8	16	1.6		
Computer related (internet)	33	0.5	4	0.4		
Computer related (other)	69	1.0	15	1.5		
Consulting	298	4.2	53	5.2		
Customer service / support	96	1.3	15	1.5		
education/ training	220	3.1	32	3.1		
engineering	52	0.7	6	0.6		
executive/ senior management	350	4.9	53	5.2		
General administration	106	1.5	16	1.6		
government / military	45	0.6	4	0.4		
Homemaker	9	0.1	0	0		
Manufacturing	24	0.3	4	0.4		
Other	292	4.1	39	3.8		
Professional	166	2.3	22	2.2		
research and development	39	0.5	5	0.5		
retired	2	0.0	0	0		

sales/ advertising/ marketing	683	9.6	95	9.4		
self-employed/ owner	166	2.3	23	2.3		
student	266	3.7	37	3.6		
tradesman/ craftsman	10	0.1	3	0.3		
Unemployed/ between jobs	214	3.0	28	2.8		
Total	7,117	100.0	1,016	100.0		
Age						
<20	19	0.3	5	0.5		25.07
20-29	1,359	19.1	226	22.2		12.6
30-44	3,417	48.0	436	42.9		22.55
45-59	1,721	24.2	270	26.6		18.93
>60	212	3.0	24	2.4		20.87
Total	6,728	94.5	961	94.6		100.02
Missing	389	5.5	55	5.4		
Total	7,117	100.0	1,016	100.0		
Gender						
Male	3,872	54.4	532	52.4	25,325,926	48.66
Female	3,210	45.1	477	46.9	26,715,990	51.34
Total	7,082	99.5	1,009	99.3	52,041,916	100
Missing	35	0.5	7	0.7		
	7,117	100.0	1,016	100.0		
Yrs of school						
1-6	233	3.3	34	3.3	NO COMPARATIVE DATA AVAILABLE	
7-12	1604	22.5	209	20.6		
13-15	1424	20	237	23.3		
16-21	1762	24.8	252	24.8		
Other	185	2.6	26	2.6		
Total	5208	73.2	758	74.6		
Missing	1909	26.8	258	25.4		
Total	7117	100	1,016	100.0		

Occupation

As illustrated by table 1 the iWAM sample cannot be compared to Census data for occupation as there is no comparable data available of this kind. The occupation categories listed in the 2001 census are as follows:

- Agriculture, Hunting and Forestry
- Fishing
- Mining and Quarrying
- Manufacturing
- Electricity, Gas and Water Supply
- Construction

- Wholesale and retail, trade, repair of motor vehicles
- Hotels and catering
- Transport, storage and communication
- Financial intermediation
- Real estate, renting and business activities
- Public administration and defence
- Education
- Health and social work
- Other

The occupation groups outlined by the UK Census can in no way be matched to the groups used by iWAM. This is understandable by the fact that iWAM has primarily been used in the white collar work fields whereas the census has a duty to recognise all areas of work. This consideration is compounded by the fact that 53.7% of the respondents group cited did not specify an occupation. For this reason a stratified sample based on occupation was rejected as a reliable way to create the standard group.

Age

Differences can be noted between the iWAM total sample and the UK Census data in age groups. The <20 age group is considerably under-represented in the iWAM sample (0.5% iWAM respondents vs. 25.07% Census data). This can be attributed to the design of iWAM as a tool for the working population to which a minority of the <20 group belong.

For similar reasons, the >60 group is under-represented in the total UK iWAM data (2.4% vs 20.87% in the Census data). This suggests that the majority of >60 have either retired from working life, or have not responded to iWAM for different reasons.

There are however continuing differences in the "working age-groups", 20-29, 30-44, 45-60, between the iWAM sample and the Census data. The 30-44 year old group is over-represented (42.9% compared to 22.5%). With nearly half of all UK iWAM respondents falling into this category this is by far the most populated age group. Reasons for the increased use of iWAM in this age group may be explained by the mid-career status of these individuals. The 20-29 and 45-60 groups are also over-represented in the iWAM sample (22.2% vs 12.6% and 26.6% vs 18.93% respectively). This discrepancy could be attributed to the comparative under-representation of the youngest and oldest age groups. The iWAM sample generally is over-representative of those within the most prolific work ages (20-60 years old). This should be taken into account when discussing the UK standard group.

Research has shown that the younger group tested on iWAM differs significantly from the older groups (Merlevede P, 2005), therefore testing on this younger age-group should be measured cautiously against the norm group. It could be that this group will differ from the norm group and this would be an interesting continuation of this research.

Gender

The iWAM sample shows more men than women (52.4% men vs 46.9% women) compared to the UK census data which shows more women than men (51.34% women vs 48.66% men). This is an interesting discrepancy as it could lead to speculation about the reasons why more men

than women have responded to the iWAM questionnaire. However while there is evidence to suggest some differences in iWAM results between men and women, research shows that these are not as significant as the differences between cultures (Merlevede P, 2005) and therefore this discrepancy shouldn't alter the results dramatically.

Years of School
The UK Census data provides no information about the number of years of schooling of the UK population.
Further, over a quarter of iWAM respondents (25.4%) did not provide a response for years of schooling. For this reason, years of school is not taken into account as an important criteria in the analysis.

IV.   Comparison of Standard Groups: UK 2001 vs UK 2012

All the iWAM patterns for the 2012 and 2001 norm groups were compared by means of a t-test. Please see the detailed chart in Appendix A. The differences between the two groups' scores on each pattern are discussed below.

As illustrated by table 2 in Appendix A, all items of the iWAM show extremely significant differences on the F-test. This suggests that the range of answers is significantly different for all patterns compared to the 2001 ranges. This may be due to the increased number in this sample and the stronger reliability of the range.

The t-tests carried out also yield a large number of statistically significant differences on items when comparing the 2001 standard group to the 2012 standard group. These are discussed below:

The patterns are discussed in pairs or triads as they feature in the iWAM report's operating factors.

"Initiation" and "Reflecting and Patience"
There is no significant change from the 2001 norm group for either initiation scores or Reflecting and patience. This suggests that these traits have remained similar in the British population during this period. The British people show a higher absolute score on Initiation (56%) compared to Reflecting and patience (46%) suggesting that British people are more likely to want immediate action rather than to think things through.

"Goal Orientation" and "Problem Solving"
Both Goal Orientation and Problem solving scores for the 2012 norm group are significantly different to the 2001 group scores. The 2012 standard group shows a significantly higher score on goal orientation than in 2001 ($p<0.001$) whereas in 2012, UK iWAM respondents scored significantly lower on problem solving than in 2001 ($p<0.001$). A further analysis of the absolute scores for these patterns reveals that not only has goal orientation increased and problem

solving has decreased over time, but that in 2012 the UK population scores considerably higher on goal orientation (82%) than problem solving (23%). Therefore in 2012, UK people are more motivated by the opportunity to reach goals and demotivated by tackling problems than in 2001.

When these two are combined as Action Direction
The 2012 standard group shows significantly higher scores on action direction than in 2001 (p<0.001) This suggests that in 2012, UK people's focus is more on goals than on finding problems compared to 2001.

"Individual Motives" and "External Reference"
Again, both of these patterns reveal significant differences between the two norm groups.
In 2012, UK people score on average lower on individual motives than in 2001 (p<0.001). This suggests that making their own decisions is less important than it was in 2001. The 2012 standard group scores significantly higher on average than the 2001 group on external reference (p<0.001). This suggests that in 2012 UK people want more feedback and opinions than in 2001 before making a decision. These changes in patterns therefore appear to be complimentary however if we consider the absolute scores for each pattern we can see that UK people actually score higher on individual motives (66%) than on external reference (42%). The significant difference between the 2 samples therefore shows individual motives and external reference becoming more balanced in the UK population.

When these are combined as Evaluation Reference
The 2012 norm group shows a significantly lower average score for evaluation reference than the 2001 norm group (p<0.001) In 2012, UK people need more motivation and decisions from external sources than in 2001.

"Alternatives" and "Follow Procedures"
These patterns are significantly different to those found in 2001. In the 2012 norm group, respondents score significantly lower on alternatives than in 2001 (p<0.001). This suggests that in 2012 UK people are less motivated to find other options than they were in 2001. The 2012 standard group shows a significantly higher average score on following procedures than in 2001 (p<0.001). This suggests that in 2012 people consider procedures to be more important than they did in 2001. Despite these differences, in 2012 UK people still score higher on alternatives (61%) than on following procedures (46%). People are therefore more likely to seek new ways of doing things compared to following set procedures.

When these two patterns are combined as Task Attitude
The 2012 task attitude range is significantly lower than the 2001 range (p<0.001). This suggests that compared to the 2001 sample, the standard group for 2012 are better at following procedures than creating alternatives.

Breadth and Depth Orientation
Breadth orientation has not changed significantly since 2001. The average score for this pattern in the 2012 UK norm group is 66%. However the 2012 group score significantly higher on depth orientation than the 2001 group (p<0.01) suggesting that UK people now pay more attention to

details than before. Yet overall the UK norm group is still showing a preference for breadth orientation with a score of 66% vs a score of 22% for depth orientation.

> **When these two patterns are combined as Task Scope**
> The 2012 group scores significantly lower on task scope than the 2001 group (p<0.05) showing more inclination towards detail orientation than in 2001.

Affective and Neutral Communication

Both of these patterns have changed significantly since 2001. The 2012 standard groups scores on average lower than in 2001 on affective communication (p<0.001). This suggests that in 2012 non-verbal signals and emotions in communication are less important than they were in 2001 to the UK population. However the 2012 group also score lower on neutral communication (p<0.05).The UK population appears quite balanced between the two forms of communication as the average score for affective communication is 40% vs 39% for neutral communication. An interesting area of research could involve the reduction of these two patterns and their possible relationship to the decrease in face to face communication with the advent of e-mail and VOIP usage.

> **When these two patterns are combined as Communication Style**
> In 2012 the average range of scores is significantly lower for communication style than in 2001 (p<0.01). This suggests that in 2012 people are less likely to consider nonverbal signals as important than they did in 2001.

Group and Individual Environment

Both of these patterns yield a significantly lower score in 2012 compared to 2001. The 2012 standard group score significantly lower on group environment (p<0.001) and significantly lower on individual environment (p<0.001) than in 2001. This suggests that compared to 2001, both social environments and working alone are not motivators for UK people. However further exploration of the data reveals that the UK norm group still score higher on group environment (56%) than individual environment (16%). UK people are therefore more likely to be motivated by working with others compared to working alone,

Sole and Shared Responsibility

The 2012 average score is significantly higher for sole responsibility than in 2001 (p<0.001). This suggests that in 2012, UK people are more likely to judge having sole responsibility as important than in 2001. This is an interesting finding if combined with the score for individual environment which suggests that in 2012 people are less likely to want to work alone than in 2001. These 2 items together seem to suggest that while in 2012, UK people are more motivated by working with others, they place more value on having sole responsibility for work than in 2001. The average score for shared responsibility is not significantly different in 2012 compared to 2001. UK people score higher on sole responsibility (56%) than shared responsibility (43%).

> **When these two patterns are combined as Work Assignment Type**
> The 2012 group score significantly higher than in 2001 (p<0.01) showing more interest in sole responsibility than sharing it.

The need for Change:

Evolution

The 2012 norm group show a significantly higher average score for evolution than the 2001 norm group (p<0.01) indicating that in 2012 UK people are more likely to want things to evolve over time and to see progress compared to the 2001 standard group.

Difference

The 2012 group scored significantly lower on difference than the 2001 group (p<0.001). This suggests that in 2012, UK people are less motivated by change than in 2001 and would be more likely to resist change than previously.

Sameness

The 2012 norm group does not significantly differ from the 2001 on Sameness score.

If absolute scores for each of these patterns are compared it is revealed that for the 2012 UK norm group, Evolution is the preferred pattern with an average score of 81%, followed by Difference (57%), followed by Sameness (14%).
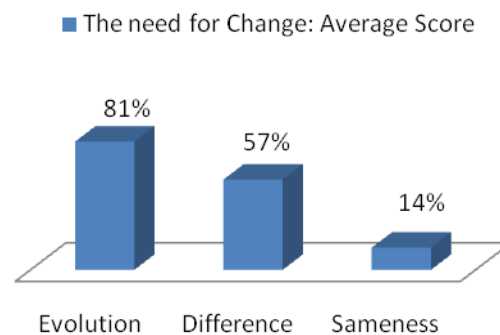

Distribution of Energy

Structure

In 2012 the average score for structure is significantly higher than in 2001 (p<0.001). In 2012 the UK population is more likely to organise resources, establish lists and identify relationships than in 2001.

There are no significant changes for **Use** or **Concept** however an analysis of the scores shows that Concept is the preferred pattern with an average score of 79%, followed by Structure (63%), followed by Use (43%).
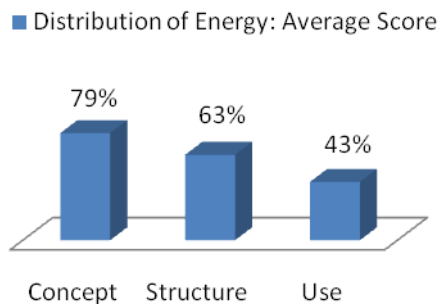
Orientation in Time
Future
The 2012 standard group scores on average significantly lower on future orientation than the 2001 group indicating that in 2012, UK people concentrate less on the future (p<0.01). There are no significant changes for **Present** or **Past.** The scores reveal that the preferred pattern is Present with an average score of 76%, followed by future (50%), followed by past (42%).

■ Orientation in Time: Average Score

76%

50%

42%

Present   Future   Past
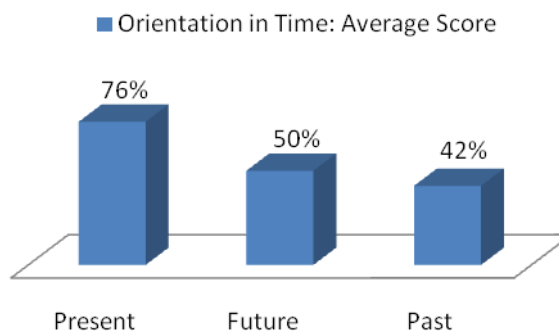
Basic Motivation
All of the basic motivation patterns have significantly changed since 2001.
Affiliation
The 2012 standard group show a significant decrease in average score for affiliation compared to 2001 (p<0.001). This suggests that in 2012, UK people are less motivated by situations where people are like them than in 2001. This is interesting considering the findings related to individual environments and motives.
Power
The 2012 group score significantly lower on power than in 2001 (p<0.05) suggesting that they are less motivated by having power, authority or control over people and things than in 2001.
Achievement
Compared to the 2001 standard group, the 2012 standard group scored significantly lower on achievement (p<0.01). This suggests that compared to the previous group, the new norm group is less motivated by situations where they can achieve.

All of these traits have decreased significantly since 2001. A comparison of the scores shows the following order of preference for the 2012 UK norm group:
Achievement (78%)
Power (40%)
Affiliation (37%).

■ Basic Motivation: average Score

78%

40%

37%

Achievement   Power   Affiliation
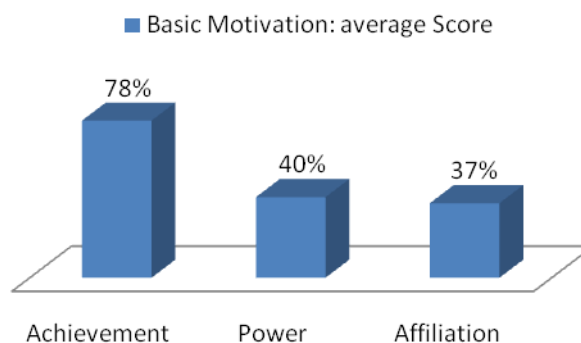
Respect for the Norms

All of these patterns show significant differences in 2012 compared to the 2001 norm group.

Compliance

The 2012 standard group score significantly higher on Compliance than the 2001 standard group ($p < 0.001$). This suggests that in 2012 UK people are more focussed on adhering to the rules of an organisation than in 2001.

Tolerance

In 2012 the average score on tolerance is significantly lower than in 2001 ($p < 0.001$). Showing decreased tolerance of other people's actions when they differ to their own

Indifference

In 2012, UK people score lower than in 2001 on indifference ($p < 0.001$) showing more concern about others' behaviours than in 2001.

Assertiveness

In 2012, UK people on average score significantly higher on assertiveness than in 2001 ($p < 0.001$). In 2012, UK people are more willing to tell others what they should do than in 2001.

The scores are as follows:
Compliance 75%
Assertiveness 62%
Tolerance 44%
Indifference 7%

Respect for the Norms: Average Score
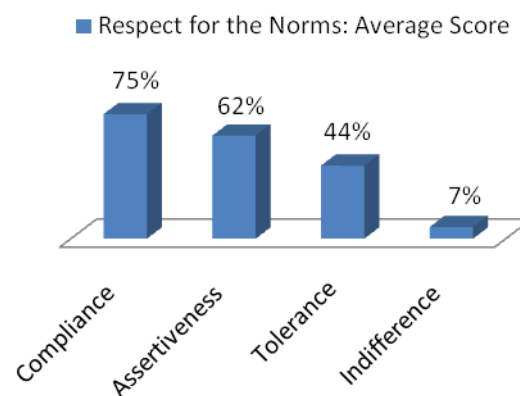
Convinced By:

Convinced by Hearing

In 2012 UK people score significantly lower on the item "convinced by hearing" than in 2001 ($p < 0.001$). This suggests that hearing information is a less important factor for convincing UK people than in was in 2001. This is a particularly interesting finding as scores on affective communication have also reduced since 2012, so while non-verbal and emotional communication are less important, hearing is less important as well.

Convinced by Reading

Compared to 2001, UK people are significantly more convinced by reading ($p < 0.001$). This suggests that in 2012, people are more likely to be convinced by reading information than they were in 2001.

There are no significant changes in the scores for **Convinced by Seeing** or **Convinced by Doing**.
The average scores are as follows:
Convinced by Seeing (80%)
Convinced by Doing (57%)
Convinced by hearing (30%)
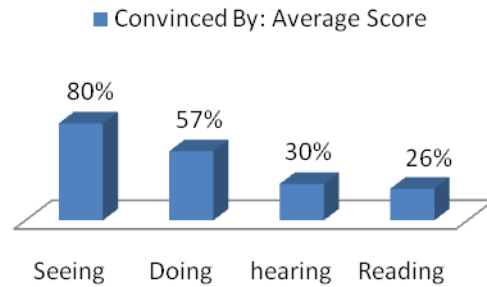Convinced by Reading (26%)

Convinced by Consistency
Compared to the 2001 norm group, the 2012 group score significantly higher on "convinced by consistency" ($p < 0.001$). This suggests that compared to 2001, UK people are now more convinced by consistency and will need information repeated to remain convinced.

Convinced Automatically
The 2012 standard group shows a significantly lower score on convinced automatically compared to the 2001 group ($p < 0.01$). This suggests that in 2012 people are less likely to be convinced automatically than previously.

Convinced after a Period of Time
The 2012 group score borderline significantly lower on convinced after a period of time ($p = 0.0797$) compared to the 2001 group. This suggests that compared to 2001, UK people a period of time is not as important a convincer as it was.

Convinced By a Number of Examples
This pattern is not significantly different to the 2001 scores.

The average scores for these patterns is as follows:
Convinced by a number of examples (66%)
Convinced by consistency (63%)
Convinced automatically (48%)
Convinced after a period of time (24%).
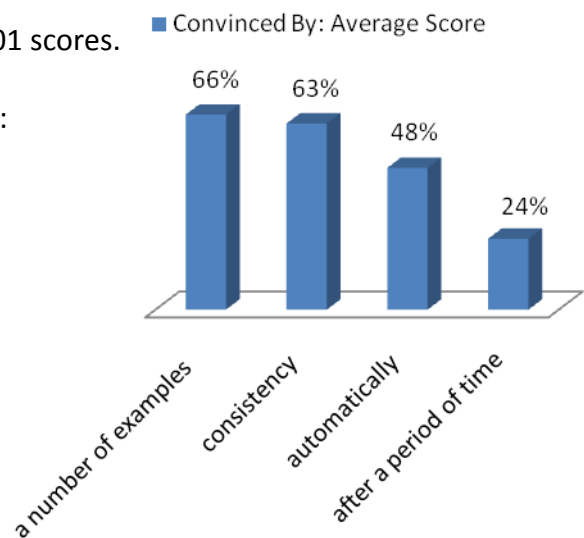
Area of focus:
Focus on Time
Compared to the 2001 norm group, the 2012 group is significantly more focused on time ($p < 0.001$). This suggests that in 2012, UK people are more focussed on allotting time and keeping schedule than they were in 2001.
Focus on People

The results of the 2012 standard group show a significantly lower focus on people than in 2001 (p<0.001) This suggests that in 2012 the UK population is less focussed on working with people and their feelings than in 2001. This could be due to their focus being drawn by other factors such as goal orientation or structure (see results above). Further, these findings reinforce the results for affective communication, which involves communication based on emotion, on which the 2012 standard group show a significant lower score than in 2001.

Focus on Activity

The 2012 group scores significantly higher on focus on activity than the 2001 group (p<0.05) which indicates that a focus on activity is more important in 2012 than previously.

Focus on Tools

The 2012 group shows a borderline significantly higher score on this pattern than in 2001 (p=0.0589) revealing a higher interest in working with tangible tools and instruments.

Focus on Systems

The 2012 norm group also shows a borderline significantly higher score for focus on systems than the 2001 norm group (=0.0876). This suggests that in 2012 UK people work better with systems and processes than previously.

There are no significant changes for **Focus on Information**, **Money** or **Place**.

The average scores for these patterns is as follows:
Focus on Information (70%)
Focus on Activity (59%)
Focus on People (58%)
Focus on Time (51%)
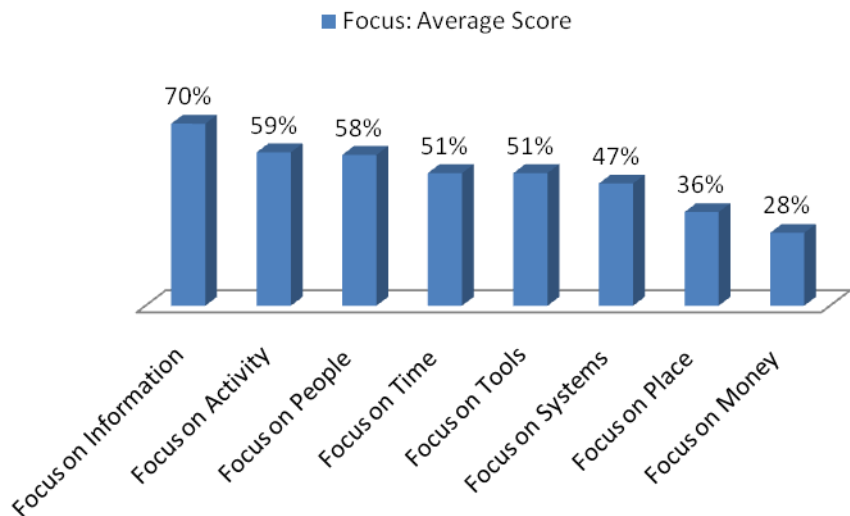Focus on Tools (51%)
Focus on Systems (47%)
Focus on Place (36%)
Focus on Money (28%)

Due to the design of the questionnaire these information patterns should not be compared between each other.

V.   Considerations:

As explained earlier there are a number of interesting considerations about the 2012 norm group to take into account when working with the iWAM. These relate with how the iWAM

norm group, as illustrated by table 1, compares to the general UK population and also with the fact that some respondents did not complete all of the demographic questions such as years of school, or occupation. Whereas respondents with missing data are generally excluded from or compensated for in statistical analysis (Roth P, 1994), this was not appropriate in this case as the missing data in iWAM is probably a characteristic of the questionnaire (and of other motivational psychometric questionnaires).

It is therefore interesting to consider the reasons why respondents did not answer some questions. This could be due to the categories specified. Respondents who were slightly unclear about what where their occupation would fit in the categories provided, or whether years of school referred to all of school, Undergraduate or postgraduate, may not have responded to the question at all.

It could also be attributed to the nature of the respondents. Are they busy when completing the questionnaire? Do they not value the questionnaire?

The sample used is also not strictly representative of the UK population, it is representative of the UK population who have completed iWAM. However this is also seen as an advantage of the iWAM norm group as it is specifically focused on the people who are most likely to complete the questionnaire. A norm group that included a large number or children or retired adults might skew the results away from what is expected from a UK working person likely to complete the iWAM.

Furthermore, norms for many other psychometric instruments are generated from student populations and these are then labelled as a UK norm. The iWAM norm group developed here is therefore likely to be more valid than those for a principally student population.

It would be also have been interesting to know more about the details of the 2001 norm group, but this was not available. When the norm group is next updated, we will be able to more effectively compare that data to this in order to better evaluate the changes that have occurred.

VI. Conclusions

JobEQ is committed to keeping its research and its tools up to date. The creation of the 2012 UK norm group has allowed us to update the processes and gain a greater understanding of the standard UK population.

The iWAM prides itself on allowing for context in analysis which has been deemed "central to the meaning of the test score" (Irvine and Berry, 1988:xvii). This focus on the specificity of culture in iWAM has set it apart from other psychometrics and over time these norm groups will be updated and tightened to keep in step with the changing culture of each country.

Due to the significance of the differences between the 2001 and 2012 samples, it would be a good idea to update the norm group more regularly in order to avoid possible cultural discrepancies between this norm and the respondents. This could be of particular importance in the coming years as "Generation Y" start their careers and we may see some of the big differences found in Patrick Merlevede's research (2005).

To summarise this: The iWAM UK norm group differs from the general UK population in a number of ways, therefore if using iWAM on an underrepresented group in this sample, there may be some differences from the norm. If iWAM is used on a group that differs significantly to the norm group, we would suggest creating a Model of Excellence for that group in order to obtain more valuable results.

If, when using iWAM, you find a particular group that greatly varies from the norm group we would ask you to contact us with your results so that we can add to this research.

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VIII.   Appendix A

Table 2: Comparison of Standard Groups: UK 2001 vs UK 2012

	Pattern	Group 1 average (Absolute)	Relative Average	Absolute Distance	Relative Distance	Std.Dev. (abs.val)	T-test	F-test
BP4	Task Attitude	58%	-11%	17%	62%	20%	p=0 *t*=8.6288 - Extremely Significant !!! - **VIP**	p=0 *F*=1.9633 - Extremely Significant !!! - **VIP**
IF7	Focus on Time	51%	97%	17%	47%	20%	p=0 *t*=8.1938 - Extremely Significant !!! - **VIP**	p=0 *F*=3.2494 - Extremely Significant !!! - **VIP**
OF4P	Alternatives	61%	-6%	15%	57%	19%	p=0 *t*=7.991 - Extremely Significant !!! - **VIP**	p=0 *F*=2.0193 - Extremely Significant !!! - **VIP**
N3	Compliance	75%	84%	10%	34%	12%	p=0 *t*=7.8851 - Extremely Significant !!! - **VIP**	p=0 *F*=5.9227 - Extremely Significant !!! - **VIP**
OF4M	Follow Procedures	46%	101%	19%	51%	26%	p=0 *t*=7.371 - Extremely Significant !!! - **VIP**	p=0 *F*=2.1057 - Extremely Significant !!! - **VIP**
N4	Tolerance	44%	19%	12%	31%	16%	p=0 *t*=6.9076 -	p=0 *F*=5.4405

						Extremely Significant !!! - **VIP**	- Extremely Significant !!! - **VIP**
WA3	Structure	63%	87%	13%	37%	18%	p=0 t=6.8199 - Extremely Significant !!! - **VIP**	p=0 F=3.5248 - Extremely Significant !!! - **VIP**
BP2	Action Direction	80%	73%	8%	23%	11%	p=0 t=6.4602 - Extremely Significant !!! - **VIP**	p=0 F=9.7335 - Extremely Significant !!! - **VIP**
N2	Indifference	7%	27%	6%	23%	9%	p=0 t=6.1716 - Extremely Significant !!! - **VIP**	p=0 F=8.2685 - Extremely Significant !!! - **VIP**
OF6P	Affective Communication	40%	22%	12%	28%	19%	p=0 t=6.0152 - Extremely Significant !!! - **VIP**	p=0 F=4.9464 - Extremely Significant !!! - **VIP**
OF2M	Problem Solving	23%	26%	9%	24%	15%	p=0 t=5.6713 - Extremely Significant !!! - **VIP**	p=0 F=6.1839 - Extremely Significant !!! - **VIP**
IF1	Focus on People	58%	20%	11%	30%	18%	p=0 t=5.6196 - Extremely Significant !!! - **VIP**	p=0 F=3.6118 - Extremely Significant !!! - **VIP**
So3	Difference	57%	22%	9%	28%	17%	p=0 t=5.3504 - Extremely Significant	p=0 F=4.004 - Extremely Significan

							!!! - **VIP**	t !!! - **VIP**
Co2	Convinced by Hearing	30%	26%	10%	24%	20%	p=0 t=5.1026 - Extremely Significant !!! - **VIP**	p=0 F=4.9158 - Extremely Significant !!! - **VIP**
OF7M	Individual Environment	16%	30%	9%	20%	17%	p=0 t=4.7838 - Extremely Significant !!! - **VIP**	p=0 F=6.786 - Extremely Significant !!! - **VIP**
OF2P	Goal Orientation	82%	67%	8%	17%	15%	p=0 t=4.6943 - Extremely Significant !!! - **VIP**	p=0 F=9.5623 - Extremely Significant !!! - **VIP**
Co7	Convinced by Consistency	63%	72%	10%	22%	21%	p=0 t=4.5104 - Extremely Significant !!! - **VIP**	p=0 F=4.5645 - Extremely Significant !!! - **VIP**
N1	Assertiveness	62%	71%	7%	21%	16%	p=0 t=4.2502 - Extremely Significant !!! - **VIP**	p=0 F=4.4508 - Extremely Significant !!! - **VIP**
BP3	Evaluation Reference	62%	18%	6%	32%	15%	p=0 t=4.2496 - Extremely Significant !!! - **VIP**	p=0 F=1.8432 - Extremely Significant !!! - **VIP**
OF8P	Sole Responsibility	56%	74%	8%	24%	18%	p=0 t=4.2149 - Extremely Significant !!! - **VIP**	p=0 F=3.3814 - Extremely Significant !!! - **VIP**
OF3P	Individual	66%	25%	7%	25%	19%	p=0.0002	p=0

	Motives						t=3.5278 - Extremely Significant !!! - **VIP**	F=2.0305 - Extremely Significant !!! - **VIP**
Mo2	Affiliation	37%	34%	7%	16%	19%	p=0.0003 t=3.4221 - Extremely Significant !!! - **VIP**	p=0 F=5.2131 - Extremely Significant !!! - **VIP**
Co3	Convinced by Reading	26%	74%	8%	24%	24%	p=0.0003 t=3.4187 - Extremely Significant !!! - **VIP**	p=0 F=2.0834 - Extremely Significant !!! - **VIP**
OF7P	Group Environment	56%	34%	8%	16%	24%	p=0.0008 t=3.1476 - Extremely Significant !!! - **VIP**	p=0 F=4.2077 - Extremely Significant !!! - **VIP**
OF3 M	External Reference	42%	71%	5%	21%	17%	p=0.0009 t=3.1372 - Extremely Significant !!! - **VIP**	p=0 F=2.2437 - Extremely Significant !!! - **VIP**
BP6	Communication Style	51%	37%	5%	13%	15%	p=0.0018 t=2.9147 - Very Significant !! - **VIP**	p=0 F=5.597 - Extremely Significant !!! - **VIP**
So2	Evolution	81%	63%	4%	13%	13%	p=0.0023 t=2.8399 - Very Significant !! - **VIP**	p=0 F=5.1369 - Extremely Significant !!! - **VIP**
TP3	Future	50%	36%	5%	14%	16%	p=0.0025 t=2.8171 - Very Significant	p=0 F=4.4964 - Extremely

							!! - **VIP**	Significant !!! - **VIP**
Mo3	Achievement	78%	63%	5%	13%	18%	p=0.0038 t=2.6778 - Very Significant !! - **VIP**	p=0 F=4.4307 - Extremely Significant !!! - **VIP**
Co6	Convinced Automatically	48%	37%	7%	13%	25%	p=0.004 t=2.6604 - Very Significant !! - **VIP**	p=0 F=4.2823 - Extremely Significant !!! - **VIP**
OF5M	Depth Orientation	22%	65%	5%	15%	19%	p=0.0052 t=2.5688 - Very Significant !! - **VIP**	p=0 F=3.0329 - Extremely Significant !!! - **VIP**
BP8	Work Assignment Type	56%	62%	4%	12%	15%	p=0.0093 t=2.3566 - Very Significant !! - **VIP**	p=0 F=4.1971 - Extremely Significant !!! - **VIP**
IF8	Focus on Activity	59%	62%	4%	12%	19%	p=0.0181 t=2.0981 - Significant ! - SIG	p=0 F=3.453 - Extremely Significant !!! - **VIP**
OF6M	Neutral Communication	39%	42%	3%	8%	15%	p=0.0302 t=1.8798 - Significant ! - SIG	p=0 F=6.3407 - Extremely Significant !!! - **VIP**
BP5	Task Scope	72%	40%	3%	10%	18%	p=0.0365 t=1.7941 - Significant ! - SIG	p=0 F=3.1692 - Extremely Significant !!! - **VIP**

Mo1	Power	40%	41%	3%	9%	18%	p=0.0455 t=1.6921 - Significant ! - SIG	p=0 F=3.5694 - Extremely Significant !!! - **VIP**
IF2	Focus on Tools	51%	58%	3%	8%	18%	p=0.0589 t=1.5654 - border Significance - BSIG	p=0 F=3.9557 - Extremely Significant !!! - **VIP**
Co8	Convinced after a Period of Time	24%	43%	3%	7%	19%	p=0.0797 t=1.4079 - border Significance - BSIG	p=0 F=3.772 - Extremely Significant !!! - **VIP**
IF3	Focus on Systems	47%	56%	2%	6%	17%	p=0.0876 t=1.3564 - border Significance - BSIG	p=0 F=5.2685 - Extremely Significant !!! - **VIP**
Co1	Convinced by Seeing	80%	56%	2%	6%	13%	p=0.1081 t=1.2376	p=0 F=5.1063 - Extremely Significant !!! - **VIP**
IF6	Focus on Place	36%	44%	2%	6%	18%	p=0.1374 t=1.0924	p=0 F=4.0425 - Extremely Significant !!! - **VIP**
TP1	Past	42%	56%	2%	6%	15%	p=0.1392 t=1.0843	p=0 F=3.1745 - Extremely Significant !!! - **VIP**
BP1	Action Level	55%	45%	2%	5%	15%	p=0.1717 t=0.948	p=0 F=3.5906 -

							Extremely Significant !!! - **VIP**
Co5	Convinced by a Number of Examples	66%	55%	2%	5%	16%	p=0.181 t=0.9117	p=0 F=3.8987 - Extremely Significant !!! - **VIP**
OF1M	Reflecting & Patience	46%	54%	1%	4%	14%	p=0.1919 t=0.8713	p=0 F=4.1704 - Extremely Significant !!! - **VIP**
OF1P	Initiation	56%	47%	1%	3%	21%	p=0.278 t=0.5888	p=0 F=3.976 - Extremely Significant !!! - **VIP**
OF5P	Breadth	66%	47%	1%	3%	23%	p=0.2881 t=0.5592	p=0 F=3.3357 - Extremely Significant !!! - **VIP**
IF5	Focus on Money	28%	47%	1%	3%	21%	p=0.3295 t=0.4413	p=0 F=2.7361 - Extremely Significant !!! - **VIP**
Co4	Convinced by Doing	57%	52%	1%	2%	20%	p=0.3598 t=0.3591	p=0 F=4.1691 - Extremely Significant !!! - **VIP**
BP7	Work Environment Type	70%	51%	1%	1%	17%	p=0.3672 t=0.3393	p=0 F=5.71 - Extremely Significant !!! - **VIP**

TP2	Present	76%	49%	0%	1%	13%	p=0.41 *t*=0.2276	p=0 *F*=5.1574 - Extremely Significant !!! - **VIP**
WA1	Use	43%	51%	0%	1%	17%	p=0.4267 *t*=0.1848	p=0 *F*=4.5757 - Extremely Significant !!! - **VIP**
So1	Sameness	14%	51%	0%	1%	14%	p=0.4386 *t*=0.1546	p=0 *F*=3.8579 - Extremely Significant !!! - **VIP**
OF8M	Shared Responsibility	43%	49%	0%	1%	16%	p=0.4573 *t*=0.1073	p=0 *F*=4.7692 - Extremely Significant !!! - **VIP**
WA2	Concept	79%	50%	0%	0%	14%	p=0.4643 *t*=0.0897	p=0 *F*=6.5698 - Extremely Significant !!! - **VIP**
IF4	Focus on Information	70%	50%	0%	0%	15%	p=0.4934 *t*=0.0166	p=0 *F*=3.7442 - Extremely Significant !!! - **VIP**
Averages for 56 patterns		52%	48%	6%	17%	17%		