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- Motivation and Engagement Wheel
- Motivation and Engagement Scale Suite
  - Motivation and Engagement Scale – Junior (Elementary/Primary) School
  - Motivation and Engagement Scale – High School
  - Motivation and Engagement Scale – University/College
  - Motivation and Engagement Scale – Sport
  - Motivation and Engagement Scale – Music (incl. Performing/Creative Arts)
  - Motivation and Engagement Scale – Work
- Motivation and Engagement Scale Score Sheet
- Motivation and Engagement Scale Profiling Sheet
- Motivation and Engagement Workbooks
  - Motivation and Engagement Workbook – Junior School
  - Motivation and Engagement Workbook – High School
  - Motivation and Engagement Workbook – University/College
- Research using the motivation and engagement materials and concepts
Overview of MES-HS

The Motivation and Engagement Scale – High School (MES-HS) is an instrument that measures high school students' (12-18 years) motivation and engagement. It assesses motivation through three adaptive cognitive dimensions (booster thoughts), three adaptive behavioral dimensions (booster behaviors), three impeding/maladaptive cognitive dimensions (mufflers), and two maladaptive behavioral dimensions (guzzlers) of motivation and engagement. Each of the eleven factors comprises four items – hence it is a 44-item instrument. To each item, students rate themselves on a scale of 1 (‘Strongly Disagree’) to 7 (‘Strongly Agree’).

Motivation Scores

Each student's answers to the four items on each motivation area are then aggregated and converted to a raw score out of 100 and then to a norm score (Motivation Quotient Score – MQ Score – similar in measurement to an IQ score) and a Grade between A and D. Hence, each student is assigned eleven MQ scores and 11 Grades. MQs for the MES-HS are described more fully below.

Boosters

Each booster falls into one of two groups: thoughts and behaviors. Booster thoughts include self-belief (or self-efficacy), learning focus (or mastery orientation), and valuing. Booster behaviors include persistence, planning, and task management.

Self-belief (eg. "If I try hard, I believe I can do my schoolwork well") is students' belief and confidence in their ability to understand or to do well in their schoolwork, to meet challenges they face, and to perform to the best of their ability.

Valuing school (eg. "Learning at school is important") is how much students believe what they learn at school is useful, important, and relevant to them or to the world in general.

Learning focus (eg. "I feel very pleased with myself when I really understand what I'm taught at school") is being focused on understanding, learning, solving problems, and developing skills.

Planning (eg. "Before I start an assignment I plan out how I am going to do it") is how much students plan their schoolwork, assignments, and study and how much they keep track of their progress as they are doing them.
Task (study) management (eg. “When I study, I usually study in places where I can concentrate”) refers to the way students use their study time, organize their study timetable, and choose and arrange where they study.

Persistence (eg. "If I can’t understand my schoolwork at first, I keep going over it until I understand it") is how much students keep trying to work out an answer or to understand a problem even when that problem is difficult or is challenging.

Mufflers
Mufflers are anxiety, failure avoidance, and uncertain control.

Anxiety (eg. "When exams and assignments are coming up, I worry a lot") has two parts: feeling nervous and worrying. Feeling nervous is the uneasy or sick feeling students get when they think about their schoolwork, assignments, or exams. Worrying is their fear about not doing very well in their schoolwork, assignments, or exams.

Failure avoidance (eg. "Often the main reason I work at school is because I don't want to disappoint my parents") occurs when the main reason students do their schoolwork is to avoid doing poorly or to avoid being seen to do poorly.

Uncertain control (eg. "I'm often unsure how I can avoid doing poorly at school") assesses students' uncertainty about how to do well or how to avoid doing poorly.

Guzzlers
Guzzlers are self-sabotage (or self-handicapping) and disengagement.

Self-sabotage (eg. "I sometimes don’t study very hard before exams so I have an excuse if I don’t do as well as I hoped") refers to students’ tendency to do things that reduce their chances of success at school. Examples are putting off doing an assignment or wasting time while they are meant to be doing their schoolwork or studying for an exam.

Disengagement (eg. "I often feel like giving up at school") assesses feelings and thoughts of giving up in particular school subjects or school generally. Students high in disengagement tend to accept failure and behave in ways that reflect helplessness.
**Calculation of Global Scores**

The eleven individual motivation scores can also be converted to four Global Scores that are the average of booster thoughts, booster behaviors, mufflers, and guzzlers.

These Global Scores are computed by simply averaging the individual scores for each group of factors.

- **Global Booster Thought Score**
  - Average of Self-belief, Valuing, and Learning Focus Scores

- **Global Booster Behavior Score**
  - Average of Planning, Task Management, and Persistence Scores

- **Global Muffler Score**
  - Average of Anxiety, Failure Avoidance, and Uncertain Control Scores

- **Global Guzzler Score**
  - Average of Self-sabotage and Disengagement Scores

**MES Pack and Online Data Collection Service**

The MES and associated forms and documentation are supplied in PDF format for printing and distribution to respondents. There is also an Excel template to help clients in data entry of hard copy survey responses. This is the MES Pack.

Lifelong Achievement Group also offers an MES online data collection service (see [www.lifelongachievement.com](http://www.lifelongachievement.com) for information and ordering). Here, the client is sent a URL that is a link to an online version of the MES. The client provides all intended respondents with this URL to access the MES online. As respondents complete the survey, responses are stored by Lifelong via the SurveyMonkey (www.surveymonkey.com) service. When all respondents have completed the survey, the client contacts Lifelong and Lifelong then emails the dataset to the client in Excel format. The client then processes and analyzes the data in the same way as they would if they had collected and entered all hard copy surveys.

The MES Online Survey comprises the following items:

- Name (if required or relevant)
- ID number (if required or relevant)
- Gender
- Age
- Grade or year level
- Basic questions on school characteristics
- Basic questions on the respondent’s academic performance
- Basic questions about the respondent’s class and school engagement
- 44 MES items (4 items for each of the 11 parts of the Motivation and Engagement Wheel)

The MES Online Data Collection Service includes the MES Pack in the license.

**MES-HS Psychometrics**

Psychometric properties reported here are based on data collected from 21,579 high school students from 58 schools (36 Government, 7 Systemic Catholic, and 15 Independent; 42 co-educational, 9 single-sex girls, 7 single-sex boys). Students were aged 12-13 years (31%), 14-15 years (36%), and 16-18 years (33%). The mean age of students was 14.52 (SD=1.57) years. Students were from Years 7 and 8 (35%), Years 9 and 10 (34%), and Years 11 and 12 (31%). In total, 55% of students were males and 45% females. First order confirmatory factor analysis (CFA) using LISREL 8.80 yields an excellent fit to the data ($\chi^2=27,182.85$, df=847, CFI=.98, RMSEA=.038), as does the higher order CFA ($\chi^2=35,315.47$, df=886, CFI=.98, RMSEA=.042). The mean reliability (Cronbach’s $\alpha$) for the 11 subscales is .79.

**‘Normative’ MQ Scores**

The raw scores on the Motivation and Engagement Scale can also be converted to ‘normative’ scores referred to as MQ (Motivation Quotient) scores. MQs have a mean of 100 and a standard deviation of 15 (like an IQ score). Using non-normalized MQs equates the means and standard deviations of the different scores for each facet of motivation and engagement (but does not affect the shape of their distributions). Subsequently, scores for each of the facets of motivation and engagement can then be compared more meaningfully. Hence, converting scores to MQs has the advantage of placing each booster, muffler, and guzzler on an approximately common metric. For example, using MQs we can say that a student is higher on planning than self-belief if s/he scores 110 and 105 on planning and self-belief respectively (even when in raw scores s/he scored lower on planning than self-belief).

Age-based MQs for boosters, mufflers, and guzzlers are presented in the Test User manual. They are based on a ‘normative’ sample of 33,778 high school students from 92 Australian schools (48 Government/Systemic and 44 Independent schools; 63 co-educational, 15 single-sex girls, 14 single-sex boys schools). Students were aged 12-13 years (32%), 14-15 years (39%), and 16-18 years (29%). The mean age of students was 14.43 (SD=1.57) years. Students were from Years 7 and 8 (34%), Years 9 and 10 (38%), and Years 11 and 12 (28%). In total, 55% of students were males and 45% females. A total of 15% of students were from a non-English speaking background. The MQs are separated into
early adolescence (12-13 years), mid adolescence (14-15 years), and late adolescence (16-18 years) groupings.
Motivation and Engagement Scale – Junior School (MES-JS; Elementary/Primary School)

MES-JS Overview
The Motivation and Engagement Scale – Junior School (MES-JS) is an instrument that measures junior (elementary/primary) school students’ (9-13 years) motivation and engagement. It assesses motivation through three adaptive cognitive dimensions (boosters), three adaptive behavioral dimensions (booster behaviors), three impeding/maladaptive cognitive dimensions (mufflers), and two maladaptive behavioral dimensions (guzzlers) of motivation and engagement. Each of the eleven factors comprises four items – hence it is a 44-item instrument. To each item, students rate themselves on a scale of 1 ('Strongly Disagree') to 5 ('Strongly Agree').

Motivation Scores
Each student’s answers to the four items on each motivation area are then aggregated and converted to a raw score out of 100 and then to a norm score (Motivation Quotient Score – MQ Score – similar in measurement to an IQ score) and a Grade between A and D. Hence, each student is assigned eleven MQ scores and 11 Grades. MQs for the MES-JS are described more fully below.

Boosters
Boosters are self-belief, learning focus, valuing of school, persistence, planning, and study management.

Self-belief (eg. "If I try hard, I believe I can do my schoolwork well"): Self-belief is students' belief and confidence in their ability to understand or to do well in their schoolwork, to meet challenges they face, and to perform to the best of their ability.

Valuing (school) (eg. "Learning at school is important"): Valuing (school) is how much students believe what they learn at school is useful, important, and relevant to them or to the world in general. If students value school they tend to believe that what they learn can be used in other parts of their life, believe that it is important to learn at school, and feel that what they learn at school is relevant to current events in the world.

Learning focus (eg. "I feel very happy with myself when I really understand what I’m taught at school"): Learning focus is being focused on learning, solving problems, and developing skills. The goal of a learning focus is to be the best student one can be. If students are learning focused they tend to work hard, want to learn more, enjoy learning new things, enjoy solving problems by working hard, and do a good job for its own satisfaction and not just for rewards.
Planning (eg. "Before I start a project I plan out how I am going to do it"): Planning is how much students plan their schoolwork, assignments, and study and how much they keep track of their progress as they are doing them.

Task (study) management (eg. “When I do homework, I usually do it where I can concentrate best”): Task (study) management refers to the way students use their homework time, organise their homework timetable, and choose and arrange where they do their schoolwork and homework.

Persistence (eg. "If I can’t understand my schoolwork, I keep trying until I do"): Persistence is how much students keep trying to work out an answer or to understand a problem even when that problem is difficult or is challenging. If students are persistent they tend to keep going over schoolwork until they understand it, spend time trying to understand things that do not make sense straightaway, and keep working at a task even when it is difficult.

Mufflers
Mufflers are anxiety, failure avoidance (fear of failure), and uncertain control.

Anxiety (eg. "When I have a project to do, I worry about it a lot"): Anxiety has two parts: feeling nervous and worrying. Feeling nervous is the uneasy or sick feeling students get when they think about their schoolwork, projects, or tests. Worrying is their fear about not doing very well in their schoolwork, projects, or tests.

Failure avoidance (eg. "The main reason I try at school is because I don't want to disappoint my parents"): Students have an avoidance focus when the main reason they do their schoolwork is to avoid doing poorly or to avoid being seen to do poorly. If students have an avoidance focus they tend to do their schoolwork mainly to avoid getting bad marks, do their schoolwork mainly to avoid people thinking they cannot do it, and do their schoolwork mainly because they do not want to disappoint their parents or teachers.

Uncertain control (eg. "When I don’t do well at school I don’t know how to stop that happening next time"): Students are uncertain in control when they are unsure about how to do well or how to avoid doing poorly. If students are uncertain in control they can be at risk of helpless or disengagement at school.

Guzzlers
Guzzlers are self-sabotage and disengagement.
Self-sabotage (eg. "Sometimes I don’t try hard at school so I can have a reason if I don’t do well"): Students self-sabotage when they do things that reduce their chances of success at school. Examples are putting off doing a project or wasting time while they are meant to be doing their schoolwork or studying for a test. If students self-sabotage they do not try hard at projects or difficult schoolwork, do not study very hard before tests, and do other things when they should be doing their homework.

Disengagement (eg. "I’ve given up being interested in school"): Students are disengaged or at risk of disengagement when they lose interest or feel like giving up in particular school subjects or school generally. Students high in disengagement tend to accept failure and believe there is little or nothing they can do to avoid failure or attain or repeat success.

Calculation of Global Scores

The eleven individual motivation scores can also be converted to four Global Scores that are the average of booster thoughts, booster behaviors, mufflers, and guzzlers.

These Global Scores are computed by simply averaging the individual scores for each group of factors.

- Global Booster Thought Score
  - Average of Self-belief, Valuing, and Learning Focus Scores
- Global Booster Behavior Score
  - Average of Planning, Task Management, and Persistence Scores
- Global Muffler Score
  - Average of Anxiety, Failure Avoidance, and Uncertain Control Scores
- Global Guzzler Score
  - Average of Self-sabotage and Disengagement Scores

MES Pack and Online Data Collection Service

The MES and associated forms and documentation are supplied in PDF format for printing and distribution to respondents. There is also an Excel template to help clients in data entry of hard copy survey responses. This is the MES Pack.

Lifelong Achievement Group also offers an MES online data collection service (see www.lifelongachievement.com for information and ordering). Here, the client is sent a URL that is a link to an online version of the MES. The client provides all intended respondents with this URL to access the MES online. As respondents complete the survey, responses are stored by Lifelong
via the SurveyMonkey (www.surveymonkey.com) service. When all respondents have completed the survey, the client contacts Lifelong and Lifelong then emails the dataset to the client in Excel format. The client then processes and analyzes the data in the same way as they would if they had collected and entered all hard copy surveys.

The MES Online Survey comprises the following items:

- Name (if required or relevant)
- ID number (if required or relevant)
- Gender
- Age
- Grade or year level
- Basic questions on school characteristics
- Basic questions on the respondent’s academic performance
- Basic questions about the respondent’s class and school engagement
- 44 MES items (4 items for each of the 11 parts of the Motivation and Engagement Wheel)

The MES Online Data Collection Service includes the MES Pack in the license.

**MES-JS Psychometrics**

Psychometric properties reported here are based on data collected from 1,249 students across 63 classes in 15 junior (primary/elementary) schools. Students were aged (a) 9 years to 11 years 6 months (47%) and (b) 11 years 7 months to 13 years (53%). The mean age of students was 10.86 (SD=.75) years. Students were from Year 5 (46%) and Year 6 (54%). In total, 54% of students were males and 46% females. First order confirmatory factor analysis (CFA) using LISREL 8.80 yields an excellent fit to the data ($\chi^2=2724.92$, df=847, CFI=.98, RMSEA=.04), as does the higher order CFA ($\chi^2=3,197.18$, df=886, CFI=.98, RMSEA=.046). The mean reliability (Cronbach’s $\alpha$) for the 11 subscales is .78.

**‘Normative’ MQ Scores**

The raw scores on the Motivation and Engagement Scale can also be converted to ‘normative’ scores referred to as MQ (Motivation Quotient) scores. MQs have a mean of 100 and a standard deviation of 15 (like an IQ score). Using non-normalized MQs equates the means and standard deviations of the different scores for each facet of motivation and engagement (but does not affect the shape of their distributions). Subsequently, scores for each of the facets of motivation and engagement can then be compared more meaningfully. Hence, converting scores to MQs has the advantage of placing each booster, muffler, and guzzler on an approximately common metric. For example, using MQs we can say

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that a student is higher on planning than self-belief if s/he scores 110 and 105 on planning and self-belief respectively (even when in raw scores s/he scored lower on planning than self-belief).

MQs for boosters, mufflers, and guzzlers are presented in the Test User manual. They are based on a sample of 1,904 students across more than 100 classes in 36 junior (primary/elementary) schools. Students were aged 10 years to 12 years. The mean age of students was 10.92 (SD=.63) years. In total, 54% of students were males and 46% females.
Motivation and Engagement Scale – University/College (MES-UC)

Overview of MES-UC

The Motivation and Engagement Scale – University/College (MES-UC) is an instrument that measures University/College (post-school) students’ motivation and engagement. It assesses motivation through three adaptive cognitive dimensions (booster thoughts), three adaptive behavioral dimensions (booster behaviors), three impeding/maladaptive cognitive dimensions (mufflers), and two maladaptive behavioral dimensions (guzzlers) of motivation and engagement. Each of the eleven factors comprises four items – hence it is a 44-item instrument. To each item, students rate themselves on a scale of 1 (‘Strongly Disagree’) to 7 (‘Strongly Agree’).

Motivation Scores

Each student’s answers to the four items on each motivation area are then aggregated and converted to a raw score out of 100 or a raw score out of 7 (if converted back to the rating scale metric). Hence, each student is assigned eleven scores.

Boosters

Each booster falls into one of two groups: thoughts and behaviors. Booster thoughts include self-belief (or self-efficacy), learning focus (or mastery orientation), and valuing. Booster behaviors include persistence, planning, and task management.

Self-belief (eg. "If I try hard, I believe I can do my university/college work well"): Self-belief is students’ belief and confidence in their ability to understand or to do well in their university/college studies, to meet challenges they face, and to perform to the best of their ability.

Valuing (university/college) (eg. "Learning at university/college is important"): Valuing (university/college) is how much students believe what they learn at university/college is useful, important, and relevant to them or to the world in general. If students value university/college they tend to believe that what they learn can be used in other parts of their life, believe that it is important to learn at university/college, and feel that what they learn at university/college is relevant to current events in the world.

Learning focus (eg. "I feel very pleased with myself when I really understand what I’m taught at university/college"): Learning focus is being focused on learning, solving problems, and developing skills. The goal of a learning focus is to be the best student one can be. If students are learning focused
they tend to work hard, want to learn more, enjoy learning new things, enjoy solving problems by working hard, and do a good job for its own satisfaction and not just for rewards.

**Planning** (eg. "Before I start an assignment, I plan out how I am going to do it"): Planning is how much students plan their university/college work, assignments, and study and how much they keep track of their progress as they are doing them.

**Task (study) management** (eg. “When I study, I usually try to find a place where I can study well"): Task (study) management refers to the way students use their study time, organize their study timetable, and choose and arrange where they study.

**Persistence** (eg. "If I can't understand my university/college work at first, I keep going over it until I do"): Persistence is how much students keep trying to work out an answer or to understand a problem even when that problem is difficult or is challenging. If students are persistent they tend to keep going over university/college work until they understand it, spend time trying to understand things that do not make sense straightaway, and keep working at a task even when it is difficult.

**Mufflers**

Mufflers are anxiety, failure avoidance, and uncertain control.

**Anxiety** (eg. "When exams and assignments are coming up, I worry a lot"): Anxiety has two parts: feeling nervous and worrying. Feeling nervous is the uneasy or sick feeling students get when they think about their university/college work, assignments, or exams. Worrying is their fear about not doing very well in their university/college work, assignments, or exams.

**Failure avoidance** (eg. "Often the main reason I work at university/college is because I don't want to disappoint others (eg. lecturers, family, partner)"): Students have an avoidance focus when the main reason they do their university/college work is to avoid doing poorly or to avoid being seen to do poorly. If students have an avoidance focus they tend to do their university/college work mainly to avoid getting bad marks, do their university/college work mainly to avoid people thinking they cannot do it, and do their university/college work mainly because they do not want to disappoint their parents or lecturers.

**Uncertain control** (eg. "I'm often unsure how I can avoid doing poorly at university/college"): Students are uncertain in control when they are unsure about how to do well or how to avoid doing poorly. If students are uncertain in control they can be at risk of helpless or disengagement at university/college.
**Guzzlers**

Guzzlers are self-sabotage (or self-handicapping) and disengagement.

*Self-sabotage* (eg. "I sometimes don’t study very hard before exams so I have an excuse if I don’t do so well"): Students self sabotage when they do things that reduce their chances of success at university/college. Examples are putting off doing an assignment or wasting time while they are meant to be doing their university/college work or studying for an exam. If students self-sabotage they do not try hard at assignments or difficult university/college, do not study very hard before tests or exams, and do other things when they should be doing their university/college or studying.

*Disengagement* (eg. "I’ve pretty much given up being interested in university/college"]: Students are disengaged or at risk of disengagement when they feel like giving up in particular university/college subjects or university/college generally. Students high in disengagement tend to accept failure, believe there is little or nothing they can do to avoid failure or attain or repeat success, behave in ways that reflect helplessness, and are chronically low in self-esteem and general optimism.

**Calculation of Global Scores**

The eleven individual motivation scores can also be converted to four Global Scores that are the average of booster thoughts, booster behaviors, mufflers, and guzzlers.

These Global Scores are computed by simply averaging the individual scores for each group of factors.

- **Global Booster Thought Score**
  - Average of Self-belief, Valuing, and Learning Focus Scores
- **Global Booster Behavior Score**
  - Average of Planning, Task Management, and Persistence Scores
- **Global Muffler Score**
  - Average of Anxiety, Failure Avoidance, and Uncertain Control Scores
- **Global Guzzler Score**
  - Average of Self-sabotage and Disengagement Scores
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The MES Online Survey comprises the following items:

- Name (if required or relevant)
- ID number (if required or relevant)
- Gender
- Age
- Year level
- Undergraduate, post-graduate status
- Full-time, part-time status
- Faculty, course, degree
- Basic questions on university/college characteristics
- Basic questions on the respondent’s academic performance
- Basic questions about the respondent’s academic engagement
- 44 MES items (4 items for each of the 11 parts of the Motivation and Engagement Wheel)

The MES Online Data Collection Service includes the MES Pack in the license.

**MES-UC Psychometrics**

Psychometric properties reported here are based on 420 undergraduate students from two Australian universities. One university is well-established and one of the oldest in the country (68% of sample). The other is a more recently established institution (32%). Most students were enrolled in education (66%), with other students enrolled in arts (18%), psychology/social science (8%), social work (3%), science (3%), and communications (2%). Most were full-time students (96%), with 4% part-time. Most
were in their first year of study (65%), with 25% in second year, 7% in third year, and 3% in fourth or fifth year. The mean age of students was 21.47 (SD=6.62) years, with 60% under 20 years of age and 40% 20 years and over. First order confirmatory factor analysis (CFA) using LISREL 8.80 yields an excellent fit to the data ($\chi^2 = 1,697.75$, $df = 847$, CFI = .96, RMSEA = .05), as does the higher order CFA ($\chi^2 = 1,968.82$, $df = 886$, CFI = .95, RMSEA = .05). The mean reliability (Cronbach’s $\alpha$) for the 11 subscales is .78.
Summary of Other Motivation and Engagement Scales: Work, Music, Sport

Motivation and Engagement Scale – Work (MES-W)
The Motivation and Engagement Scale – Work (MES-W) is an instrument that measures motivation and engagement in the workplace. It assesses employee/staff motivation through three adaptive cognitive dimensions (booster thoughts – self-belief, valuing, learning focus), three adaptive behavioral dimensions (booster behaviors – planning, task management, persistence), three impeding/maladaptive cognitive dimensions (mufflers – anxiety, failure avoidance, uncertain control), and two maladaptive behavioral dimensions (guzzlers – self-sabotage, disengagement). Each of the eleven factors comprises four items – hence it is a 44-item instrument. To each item, respondents rate themselves on a scale of 1 (‘Strongly Disagree’) to 7 (‘Strongly Agree’).

The eleven individual motivation scores can also be converted to four Global Scores that are the average of booster thoughts, booster behaviors, mufflers, and guzzlers. These Global Scores are computed by simply averaging the individual scores for each group of factors. Hence, the Global Booster Thought Score is the average of self-belief, valuing, and learning focus scores; the Global Booster Behavior Score is the average of planning, task management, and persistence scores; the Global Muffler Score is the average of anxiety, failure avoidance, and uncertain control scores; and, the Global Guzzler Score is the average of self-sabotage and disengagement scores.

Psychometrics for the MES-W reported here are based on 637 personnel from 18 elementary and high schools. Eight were government schools, 8 were systemic Catholic schools, and 2 were independent schools. Eight were elementary schools, 7 were high schools, and 3 were both. Two-thirds (68%) of the respondents were female and 32% were male. The mean age of respondents was 43.77 (SD = 10.70) years, working in schools for an average of 16.71 (SD = 10.96) years. Most participants (81%) were teachers, 3% were counseling staff, 3% were administrative staff, and 13% were executive staff. Just under half (47%) reported their highest educational qualification was an undergraduate degree, 44% reported a postgraduate qualification as their highest qualification, 8% reported a certificate or diploma as their highest qualification, and a further 1% reported school as their highest educational attainment. First order confirmatory factor analysis (CFA) using LISREL 8.80 yields an excellent fit to the data ($\chi^2 = 2,033.71$, df = 847, CFI = .97, RMSEA = .05), as does the higher order CFA ($\chi^2 = 2,441.68$, df = 886, CFI = .96, RMSEA = .05). The mean reliability (Cronbach’s $\alpha$) for the 11 subscales is .78.

Motivation and Engagement Scale – Music (MES-M – including other Performing Arts)
The Motivation and Engagement Scale – Music (MES-M) is an instrument that measures motivation and engagement in the music domain – but is readily adapted for use in other performing arts (eg.
drama, dance etc.) domains. It assesses musicians’ (and other performing artists’) motivation through three adaptive cognitive dimensions (booster thoughts – self-belief, valuing, learning focus), three adaptive behavioral dimensions (booster behaviors – planning, task management, persistence), three impeding/maladaptive cognitive dimensions (mufflers – anxiety, failure avoidance, uncertain control), and two maladaptive behavioral dimensions (guzzlers – self-sabotage, disengagement). Each of the eleven factors comprises four items – hence it is a 44-item instrument. To each item, respondents rate themselves on a scale of 1 (‘Strongly Disagree’) to 7 (‘Strongly Agree’).

The eleven individual motivation scores can also be converted to four Global Scores that are the average of booster thoughts, booster behaviors, mufflers, and guzzlers. These Global Scores are computed by simply averaging the individual scores for each group of factors. Hence, the Global Booster Thought Score is the average of self-belief, valuing, and learning focus scores; the Global Booster Behavior Score is the average of planning, task management, and persistence scores; the Global Muffler Score is the average of anxiety, failure avoidance, and uncertain control scores; and, the Global Guzzler Score is the average of self-sabotage and disengagement scores.

Psychometrics for the MES-M reported here are based on 224 young classical musicians from a high school (N=138) with a specialist focus on music and a university (N=86). These students are skilled young musicians. Hence, for these respondents music is a salient domain in their lives. The school musicians were in junior high school (Years 7 and 8: 33% – approx. 12-14 years), middle high (Years 9 and 10: 33% – approx. 14-16 years), and senior high (Years 11 and 12: 34% – approx. 16-18 years). Just under two-thirds (60%) of respondents were female and 40% were male. The mean age of school musicians was 14.43 (SD = 1.82) years. On average, school musicians had been playing their target instrument for 6.83 (SD = 2.95) years. The university musicians were enrolled in music-related degrees and in first year (69%), second year (20%), and third and fourth years (8% and 3% respectively). Just over half (59%) the university musicians were female and 41% were male. The mean age of university musicians was 19.60 (SD = 2.63) years. On average, university musicians had been playing their target instrument for 10.09 (SD = 3.63) years. The major target instruments played in the music sample were violin (20% of respondents), piano (19%), clarinet (9%), flute (8%), cello (6%), voice (6%), trumpet (5%), with (in declining order of frequency) viola, saxophone, oboe, double bass, bassoon, French horn, trombone, percussion, tuba, guitar, organ, and recorder each being a target instrument for less than 5% of the sample. First order confirmatory factor analysis (CFA) using LISREL 8.80 yields an excellent fit to the data ($\chi^2 = 1,439.75$, $df = 847$, CFI = .95, RMSEA = .06), as does the higher order CFA ($\chi^2 = 1,533.95$, $df = 886$, CFI = .94, RMSEA = .06). The mean reliability (Cronbach’s $\alpha$) for the 11 subscales is .79.

Motivation and Engagement Scale – Sport (MES-S)
The Motivation and Engagement Scale – Sport (MES-S) is an instrument that measures motivation and engagement in the sporting domain. It assesses sportspeople’s motivation through three adaptive cognitive dimensions (booster thoughts – self-belief, valuing, learning focus), three adaptive behavioral dimensions (booster behaviors – planning, task management, persistence), three impeding/maladaptive cognitive dimensions (mufflers – anxiety, failure avoidance, uncertain control), and two maladaptive behavioral dimensions (guzzlers – self-sabotage, disengagement). Each of the eleven factors comprises four items – hence it is a 44-item instrument. To each item, respondents rate themselves on a scale of 1 (‘Strongly Disagree’) to 7 (‘Strongly Agree’).

The eleven individual motivation scores can also be converted to four Global Scores that are the average of booster thoughts, booster behaviors, mufflers, and guzzlers. These Global Scores are computed by simply averaging the individual scores for each group of factors. Hence, the Global Booster Thought Score is the average of self-belief, valuing, and learning focus scores; the Global Booster Behavior Score is the average of planning, task management, and persistence scores; the Global Muffler Score is the average of anxiety, failure avoidance, and uncertain control scores; and, the Global Guzzler Score is the average of self-sabotage and disengagement scores.

Psychometrics for the MES-S reported here are based on 239 young sportspeople. All participants played competitive sport (e.g., for school, district, state, and/or country) or were part of a formal sports program for young sportspeople with potential. Hence, for these respondents sport is a salient domain in their lives. Just under half (43%) the respondents were female and 57% were male. The mean age of respondents was 14.20 (SD = 1.61) years. The major target sports played were rugby/league (21% of respondents), football/soccer (19%), netball (11%), swimming (8%), basketball (7%), surfing (7%), dancing (6%), athletics (5%), with baseball, cricket, softball, tennis, equestrian, squash, golf, hockey, ice hockey, skating, martial arts, snow boarding, gymnastics, cycling, shooting, sailing, and water polo each being a target sport for less than 5% of the sample. On average, the participants had been playing their target sport for 6.66 (SD = 3.21) years. First order confirmatory factor analysis (CFA) using LISREL 8.80 yields an excellent fit to the data ($\chi^2 = 1,563.13$, df = 847, CFI = .94, RMSEA = .06), as does the higher order CFA ($\chi^2 = 1,701.97$, df = 886, CFI = .94, RMSEA = .06). The mean reliability (Cronbach’s $\alpha$) for the 11 subscales is .74.
# SCORE SHEET

Motivation and Engagement Profile for __________________________

<table>
<thead>
<tr>
<th>Age __________ years</th>
<th>Testing Date ________________</th>
</tr>
</thead>
</table>

## TABLE 1. BOOSTERS
– higher MQs are better

<table>
<thead>
<tr>
<th>Booster</th>
<th>Raw Score / 100 ROUNDED</th>
<th>MQ</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB. Self belief</td>
<td>Q13 + Q23 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P. Persistence</td>
<td>Q1 + Q9 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LF. Learning focus</td>
<td>Q2 + Q7 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V. Valuing</td>
<td>Q4 + Q14 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TM. Task management</td>
<td>Q3 + Q17 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLN. Planning</td>
<td>Q21 + Q27 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## TABLE 2. MUFFLERS AND GUZZLERS
– lower MQs are better

<table>
<thead>
<tr>
<th>Muffler</th>
<th>Raw Score / 100 ROUNDED</th>
<th>MQ</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>D. Disengagement</td>
<td>Q8 + Q15 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS. Self-sabotage</td>
<td>Q5 + Q24 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UC. Uncertain control</td>
<td>Q6 + Q12 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FA. Failure avoidance</td>
<td>Q11 + Q20 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. Anxiety</td>
<td>Q10 + Q19 + &lt;&lt;full item set supplied with license&gt;&gt;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## TABLE 3. GLOBAL MQs

<table>
<thead>
<tr>
<th>MQ</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Booster Thoughts</td>
<td></td>
</tr>
<tr>
<td>Average* of SB and LF and V MQs</td>
<td></td>
</tr>
<tr>
<td>Global Booster Behaviors</td>
<td></td>
</tr>
<tr>
<td>Average* of P and TM and PLN MQs</td>
<td></td>
</tr>
<tr>
<td>Global Muffler</td>
<td></td>
</tr>
<tr>
<td>Average* of UC and FA and A MQs</td>
<td></td>
</tr>
<tr>
<td>Global Guzzler</td>
<td></td>
</tr>
<tr>
<td>Average* of D and SS MQs</td>
<td></td>
</tr>
</tbody>
</table>

* Only compute an average if student has an MQ for every facet on this dimension

100 is the average MQ for a large ‘normative’ sample of school students

Booster Grades range from A (‘Strength’: >1 SD above 100) to D (‘Needs More Work’: >1 SD below 100)

Muffler and Guzzler Grades range from A (‘Strength’: >1 SD below 100) to D (‘Needs More Work’: >1 SD above 100)
GRADE PROFILING SHEET

Motivation & Engagement Grade Profile for _______________ Date _____

**BOOSTER THOUGHTS**

- Learning focus (LF)
- Valuing (V)
- Self-belief (SB)
- Disengagement (D)

**BOOSTER BEHAVIORS**

- Planning (PLN)
- Task management (TM)
- Persistence (P)
- Anxiety (A)
- Failure avoidance (FA)

**GUZZLERS**

- Self-sabotage (SS)

**MUFFLERS**

- Uncertain control (UC)

---

<table>
<thead>
<tr>
<th>SB</th>
<th>V</th>
<th>LF</th>
<th>PLN</th>
<th>TM</th>
<th>P</th>
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</thead>
<tbody>
<tr>
<td>MQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Higher MQs are better (100 is the average)</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Booster Grades range from A (‘Strength’: &gt;1 SD above 100) to D (‘Needs More Work’: &gt;1 SD below 100)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A</th>
<th>FA</th>
<th>UC</th>
<th>SS</th>
<th>D</th>
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</thead>
<tbody>
<tr>
<td>MQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower MQs are better (100 is the average)</td>
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<td></td>
</tr>
<tr>
<td>Muffler and Guzzler Grades range from A (‘Strength’: &gt;1 SD below 100) to D (‘Needs More Work’: &gt;1 SD above 100)</td>
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Motivation & Engagement Grade Profile for John Brown Date March 15th 2011

<table>
<thead>
<tr>
<th>MQ</th>
<th>SB</th>
<th>V</th>
<th>LF</th>
<th>PLN</th>
<th>TM</th>
<th>P</th>
</tr>
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<tr>
<td></td>
<td>120</td>
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<td>110</td>
<td>100</td>
<td>115</td>
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Higher MQs are better (100 is the average)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Booster Grades range from A (‘Strength’: &gt;1 SD above 100) to D (‘Needs More Work’: &gt;1 SD below 100)</th>
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<tbody>
<tr>
<td>A</td>
<td>A</td>
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<tr>
<td>B</td>
<td>B</td>
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<table>
<thead>
<tr>
<th>PROGRAM MODULE</th>
<th>COMPONENTS 1 TO 4</th>
</tr>
</thead>
</table>
2. Generate—  
   a. Challenging negative thinking  
   b. Identifying ways to build more success into one’s schoolwork  
   c. Identify one’s academic strengths and talents  
3. Reflect—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. Closure—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
| MODULE 2. Valuing school | 1. Prepare—Define factor, general rules, advance organizer for Module  
2. Generate—  
   a. Linking school to the world  
   b. Linking school to one’s life  
   c. Skills learnt in school  
3. Reflect—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. Closure—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
| MODULE 3. Learning focus | 1. Prepare—Define factor, general rules, advance organizer for Module  
2. Generate—  
   a. Achieving Personal Bests (PBs)  
   b. Developing active learning  
   c. Changing the reasons for learning  
3. Reflect—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. Closure—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
2. Generate—  
   a. Planning what to do and how to do it  
   b. Understanding what one is asked to do  
   c. Monitoring progress  
3. Reflect—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. Closure—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
| MODULE 5. Task management | 1. Prepare—Define factor, general rules, advance organizer for Module  
2. Generate—  
   a. Working under good study conditions  
   b. Using one’s time better  
   c. Developing a weekly study timetable  
3. Reflect—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. Closure—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
2. Generate—  
   a. Breaking work into more achievable components  
   b. Identifying the keys to previous times of persistence  
   c. Understanding previous times when persistence was a problem  
3. Reflect—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. Closure—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
<table>
<thead>
<tr>
<th>PROGRAM MODULE</th>
<th>COMPONENTS 1 TO 4</th>
</tr>
</thead>
</table>
| **MODULE 7. Anxiety** | 1. **Prepare**—Define factor, general rules, advance organizer for Module  
2. **Generate**—  
   a. Relaxation techniques  
   b. Preparing for tests  
   c. Taking tests  
3. **Reflect**—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. **Closure**—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
| **MODULE 8. Uncertain control** | 1. **Prepare**—Define factor, general rules, advance organizer for Module  
2. **Generate**—  
   a. Identifying reasons for past academic outcomes  
   b. Identifying which of these are within one’s control  
   c. Identifying ways to focus on these controllable reasons more  
3. **Reflect**—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. **Closure**—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
| **MODULE 9. Failure avoidance** | 1. **Prepare**—Define factor, general rules, advance organizer for Module  
2. **Generate**—  
   a. Identifying the actions and thoughts that can deal with fear  
   b. Seeing mistakes as keys to improvement  
   c. Tackling ‘unhelpful’ reasons for learning  
3. **Reflect**—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. **Closure**—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
| **MODULE 10. Self-sabotage** | 1. **Prepare**—Define factor, general rules, advance organizer for Module  
2. **Generate**—  
   a. Identifying examples of self-sabotage  
   b. Identifying reasons why one might self-sabotage  
   c. Identifying strategies to tackle self-sabotage  
3. **Reflect**—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. **Closure**—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
| **MODULE 11. Disengagement** | 1. **Prepare**—Define factor, general rules, advance organizer for Module  
2. **Generate**—  
   a. Identifying one’s own contribution in academic outcomes  
   b. Identifying past times at school when things were not so bad  
   c. Using this information to ‘glimpse’ the future  
3. **Reflect**—Identifying important messages, how to apply them, and rating one’s confidence in applying messages  
4. **Closure**—Revisiting important strategies and having work signed off by oneself and one’s parent/teacher |
<table>
<thead>
<tr>
<th>PROGRAM MODULE</th>
<th>COMPONENTS 1 TO 5</th>
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<tbody>
<tr>
<td>MODULE 12.</td>
<td>1. Identifying the lowest confidence rating in the ‘Reflect’ component across the</td>
</tr>
<tr>
<td>Topping Up</td>
<td>eleven modules</td>
</tr>
<tr>
<td></td>
<td>2. Revisiting this module and refreshing major points</td>
</tr>
<tr>
<td></td>
<td>3. Identifying how these major points can be helpful</td>
</tr>
<tr>
<td></td>
<td>4. Identifying ways to apply these major points</td>
</tr>
<tr>
<td></td>
<td>5. Signing off—revisiting important strategies and having work signed off by oneself and one’s parent/teacher</td>
</tr>
<tr>
<td>MODULE 13.</td>
<td>1. Identifying the highest confidence rating in the ‘Reflect’ component across the</td>
</tr>
<tr>
<td>Finishing on a</td>
<td>eleven modules</td>
</tr>
<tr>
<td>high note</td>
<td>2. Revisiting this module and refreshing major points</td>
</tr>
<tr>
<td></td>
<td>3. Identifying how these major points can be helpful</td>
</tr>
<tr>
<td></td>
<td>4. Identifying ways to apply these major points</td>
</tr>
<tr>
<td></td>
<td>5. Signing off—revisiting important strategies and having work signed off by oneself and one’s parent/teacher</td>
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SOME RECENT RESEARCH USING THE MOTIVATION AND ENGAGEMENT MATERIALS AND CONCEPTS


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