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Southern African Association for Institutional Research

CENTRE *for* STUDENT SUPPORT SERVICES

THERE IS A STUDENT BEHIND THE DATA

Student success – some pointers

DE WET SCHUTTE

DATA ANALYST - STUDENT SUPPORT CENTRE (CSSS)

RESPICE PROSPICE

UNIVERSITY *of the* WESTERN CAPE

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Presentation is based on information accumulated during:

- The Making Your Mark through MAPWorks report, an UCDG-funded project on the use of a predictive analytical instrument during 2018 and 2019 (Schutte, Hendricks & Kaylor, 2020).
- Lessons learnt during the development of an adapted UWC CSSS predictive analytical instrument (Student Thermometer©).

INTRODUCTION: SOME OBSERVATIONS TO INCLUDE IN OUR COLLOQUIAL DISCUSSIONS

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1. All teriary educational institutions collect information about institutional status, mainly for (i) **marketing** purposes and to improve enhance their (ii) **teacing and learning capacity** and to increase their (iii) **throughput rate**.
2. All three **outputs** depend on the **input** of **learner analytics**.
3. Like most reputable universities, the UWC is also doing **advanced work** in this field.
4. However, there is **not only one best practice** in this regard. There is only room for **improved practices**.
5. We can all **learn from each other**, **adapt** and **permeate** ideas to **continiously improve our current best efforts**.
6. We at UWC are proud to be part of, and to host this SAAIR initiative in search of **how all of us can raise the bar in our respective institutions.**

INTRODUCTION: SOME OBSERVATIONS TO INCLUDE IN OUR COLLOQUIAL DISCUSSIONS (Cont.)

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7. Apart from the phenomenal **initiatives** and **cutting-edge work** done by the **Siyaphumelela Network partnership at UWC** in collaboration with all the other **partners in the network**, all **Faculties** are also in some or other way involved as a **provider and/or user of data** for **evidence-based approaches** to enhance student success.
8. Surely the same scenario holds true for **all institutions represented in this workshop** and we can only learn from each other.
9. As researchers and scientists we are acutely aware of the fact that the **more we know**, the more we become aware of **what we don't know.**

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BACK TO BASICS: A REALTY CHECK OF THE TERTIARY EDUCATIONAL ENVIRONMENT

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1. Worldwide, all university campuses show both (i) **communalities** and (ii) **unique differences**.
2. **Communalities (Academic related)**: Mainly related to **non-negotiable academic related criteria** for institutions that want to be internationally recognised.
3. **Differences (Student related)**: Mainly related to **unique (i) environmental**, (ii) **physical**, (iii) **cultural** and (iv) **psychosocial** factors that could positively or negatively impact on the the academic knowledge transfer environment.
4. In **combination**, both would have a **direct** or **indirect influence** on the respective university's student academic performance that in turn impacts on the institution's **throughput rate**.

BACK TO BASICS: A REALTY CHECK OF ACCESS CRITERIA TO ANY UNIVERSITY IN SOUTH AFRICA

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5. The only criterion that acts as primary filter to register as a student at any university in SA is a **National Senior Certificate** (NSC) with **seven subjects** certified by Umalusi with a minimum achievement rating of 50% in four subjects.
6. At the UWC we offer approximately 2 010 subject modules to students. Reality is that first year students might have had exposure to a **maximum of five to seven subjects/modules** that relate to their school education, of which the **contents of** only **one or two,** or even **none** might have had **some bearing** on their first year subjects.
7. The bulk of the subjects offered at any university **do not** form part of the school curricula.
8. **Academically, almost all students start afresh and from the same page**.

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BACK TO BASICS: A REALTY CHECK OF CRITERIA FOR STUDENT ACCESS TO ANY UNIVERSITY CAMPUS

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1. Students on all campuses come from a spectrum of (i) **cultural**, (ii) **family** and (iii) **educational** contexts.
2. In SA no "standardised" element other than (i) **school academic performance** and (ii) **financial resources** acts as filter to access to a university.
3. Students need a "mirror" to fathom their (i) **personal preparedness**, and (ii) **progress after making personal adjustments** to enhance their **student experience at UWC**.
4. It seems that most 1st year "don't know, what they don't know" because of the new **unique edu-social** (academic and psychosocial) environment in which they have to navigate to succeed.

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BACK TO BASICS: A REALTY CHECK ON THROUGHOUT RATE

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1. To improve the **throughput rate** is both a concern and priority for probably all any university management.
2. But, to focus on first year students is not the only intervention that would make all a difference in the throughput rate at universities.
3. Throughput rate is affected by any student whose **graduation is delayed** because he/she failed a core subject in any academic year of a programme.
4. Clearly, **learner analytics** is **key** to identify areas for intervention where this **preparedness** (re-socialisation) for the university environment can be improved.

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SOME COMMENTS TO INCLUDE IN OUR COLLOQUIAL DISCUSSIONS: THE MISSING MIDDLE

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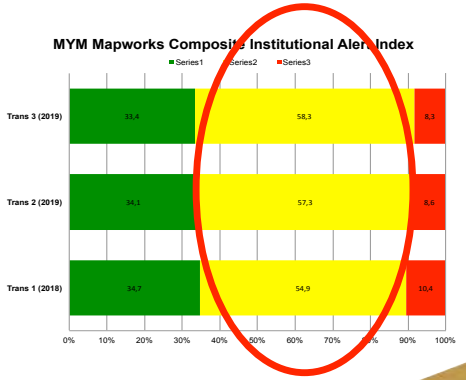
1. Dominant forms of assessment (tests, assignments, exams, etc.) do not provide a holistic picture of the factors that contribute to improved academic performance.
2. The majority of students that "**struggle" on their own, persevere and ultimately "just pass**", and are often overlooked because they just cope! They form the bulk of our student core are the **neglected/missing middle**.



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ALL CAMPUSSES OFFER UNIQUE EDUCATIONAL ENVIRONMENTS

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1. Any university campuses show differences that can be ascribed to **unique elements** such as the (i) **physical environment** (location, architecture, etc.) and (ii) **cultural traits** often deeply rooted in the (iii) **history** of the respective institutions and campuses.
2. Some of these unique elements could have a **direct** or **indirect** impact on **students' academic performance**, and a **positive** or **negative** impact on the institution's **throughput rate**.
3. However, there seems to be some **broad consensus** in research findings as to what a student needs to be academically successful in **any university environment.**

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NEED FOR A PREDICTIVE ANALYTICAL INSTRUMENT

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1. CSSS staff interactions with students confirm that some of the **struggles students experience** could have been **avoided** if they had **access to early warning signs** that over time developed into a student's academic failure.
2. At CSSS we embarked on a paradigm shift from a (i) **deficit interventionist** approach, to a (ii) **proactive possibility** approach that (i) includes the **student voice** and a focus on the development of a (ii) **student-university partnership** to enhance an integrated institutional agency.
3. The use of **learner analytics is key in this process** and calls for timeously and **evidence-based indicators of** students' studiousness.

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DEVELOPING A PREDICTIVE ANALYTICAL STUDIOUS ASSESSMENT INSTRUMENT: SOME LESSONS LEARNT

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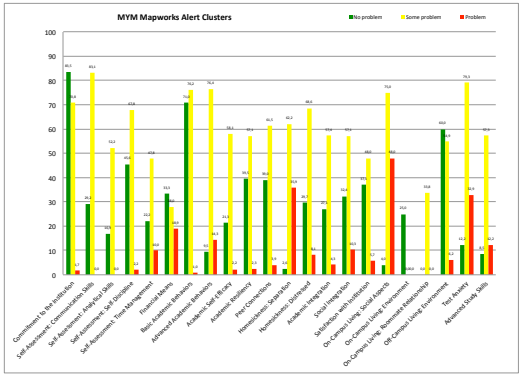
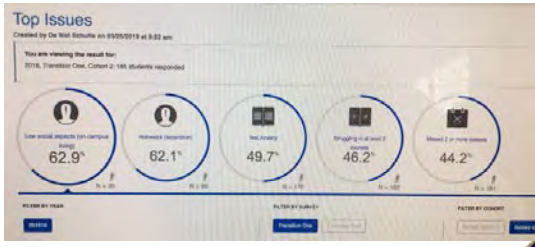
1. Knowing "**too much and too detailed information**" is just as unmanageable as knowing the "**scant too little information**" regarding a phenomenon.
2. Neither has **practical predictive value** for possible intervention purposes.
3. In search of a **possible balance** we had to go **beyond** generally accepted **perceptions**, **popular notions** and **flavour of the month** approaches.
4. The search took us literally on a journey that took us **back to the drawing board**.





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BUT ……

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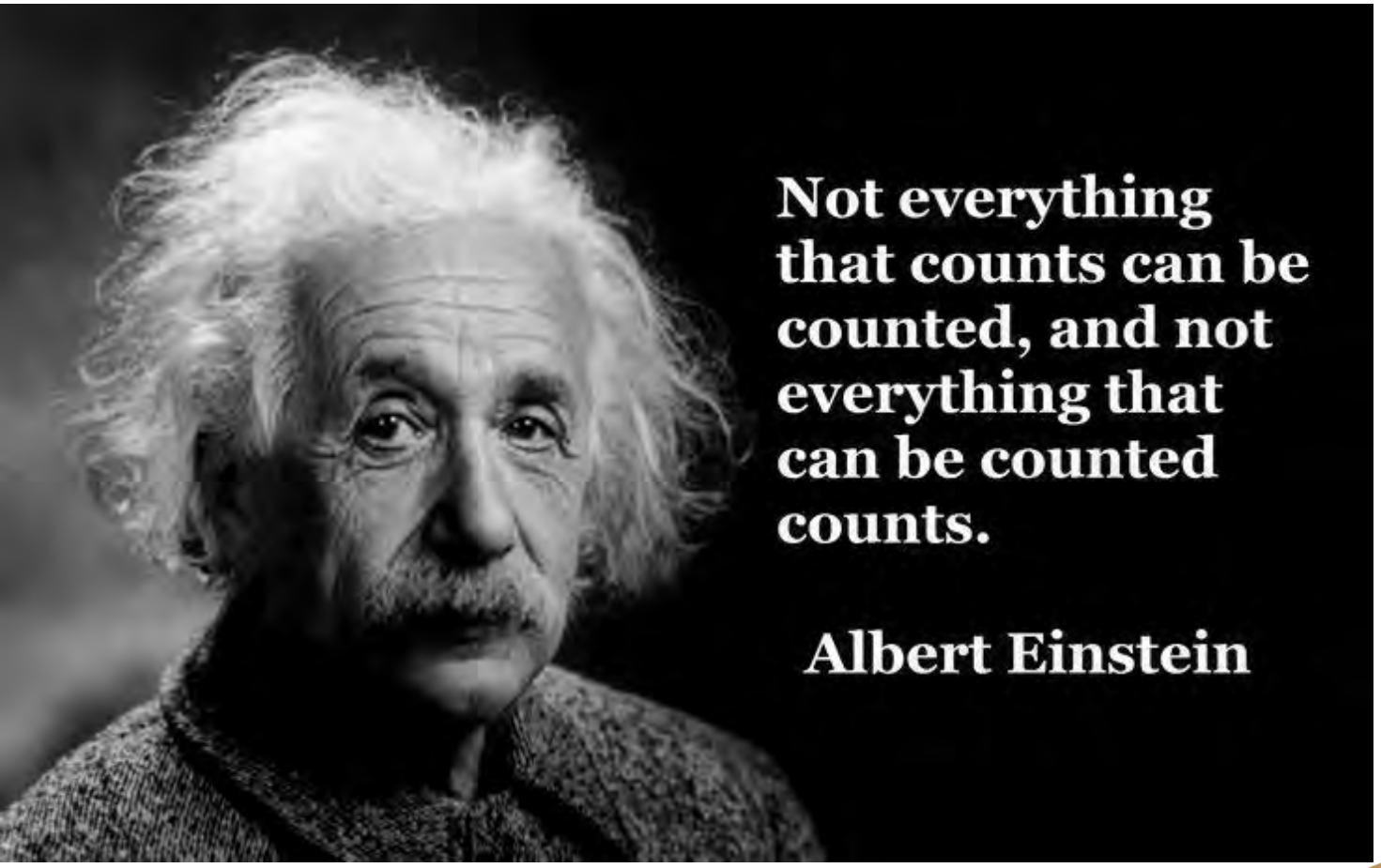

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DEVELOPING A PREDICTIVE ANALYTICAL STUDIOUS ASSESSMENT INSTRUMENT: SOME LESSONS LEARNT

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Without knowing, this individual had a major impact on our search for solutions to our student problems during the advent of the COVID-19 pandemic!

This man deserves our respect!

1. 100% Organic
2. 100% Safe
3. 100% fit
4. 100% recyclable
5. Blended postmodern technology in the real sense of the word!
6. Creative, ingenious, practical.

DEVELOPING A UWC PREDICTIVE ANALYTICAL STUDIOUS ASSESSMENT INSTRUMENT: SOME LESSONS LEARNT

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1. Allow me to share **some observations** and **possible research pointers** during my research work for the Making Your Mark (MYM) programme in the Centre for Student Support Services (CSSS) at UWC.
2. We did exactly what was said: **Went back to basics**. We visited the work done by other institutions, of which some are represented in this virtual space today.
3. A detailed study of **28 predictive analytical instruments** revealed that the focus fell on a total of **11 clusters** that were measured, with (i) creative thinking, (ii) self-motivation and (iii) social integration as the three clusters that feature in most instruments.
4. During this process, the "absence of the student voice" was clear!

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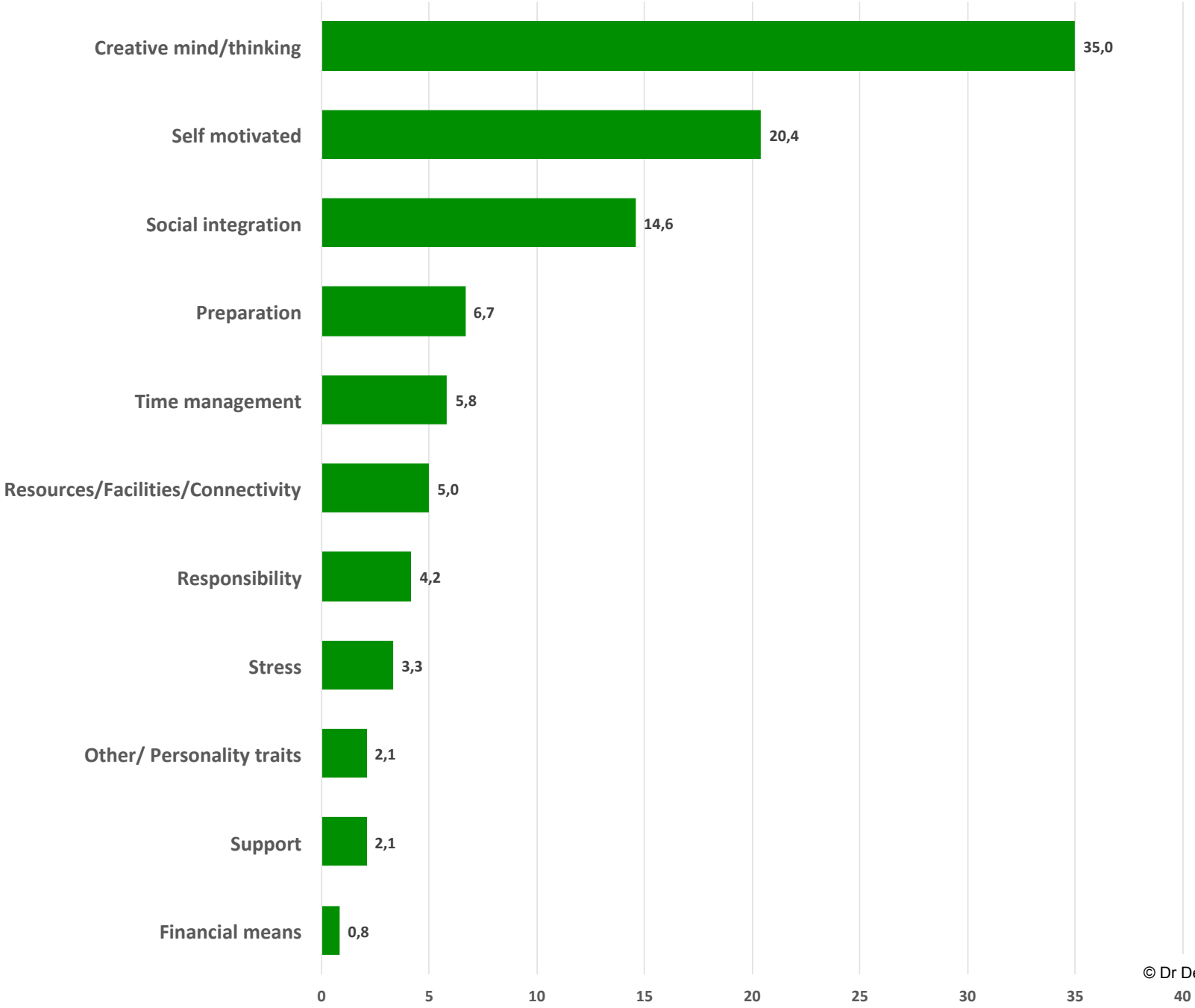
FOCI OF A SELECTION OF 28 PREDICTIVE ANALYTICAL INSTRUMENT CLUSTERS



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INPUTS FROM: THE STUDENT VOICE BEHIND LEARNER ANALYTIC DATA

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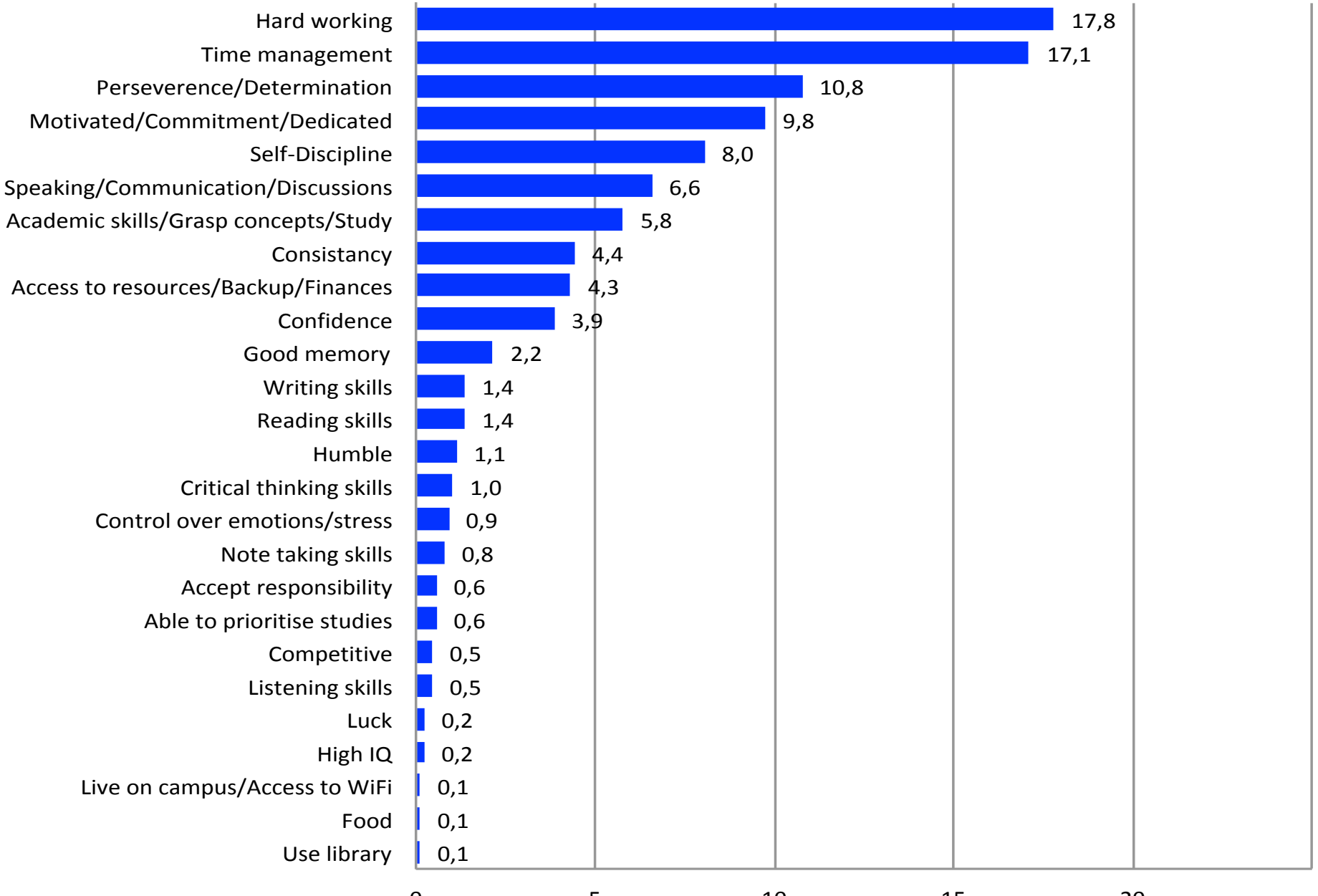
The MYM Mapworks trial study (2018-2019) included data from three questions relevant to this discussion:

Questions:

1. If you look at **successful students** in your faculty, what do you think is the one most important quality/ability **they have**?
2. What are the qualities/changes you are aware of that you **personally** should work on, to make it possible to reach the highest level of **academic success** you currently aspire to?
3. What are the **academic skills** your **faculty** should train their students in?

Perceptions of qualities/abilities of successful students



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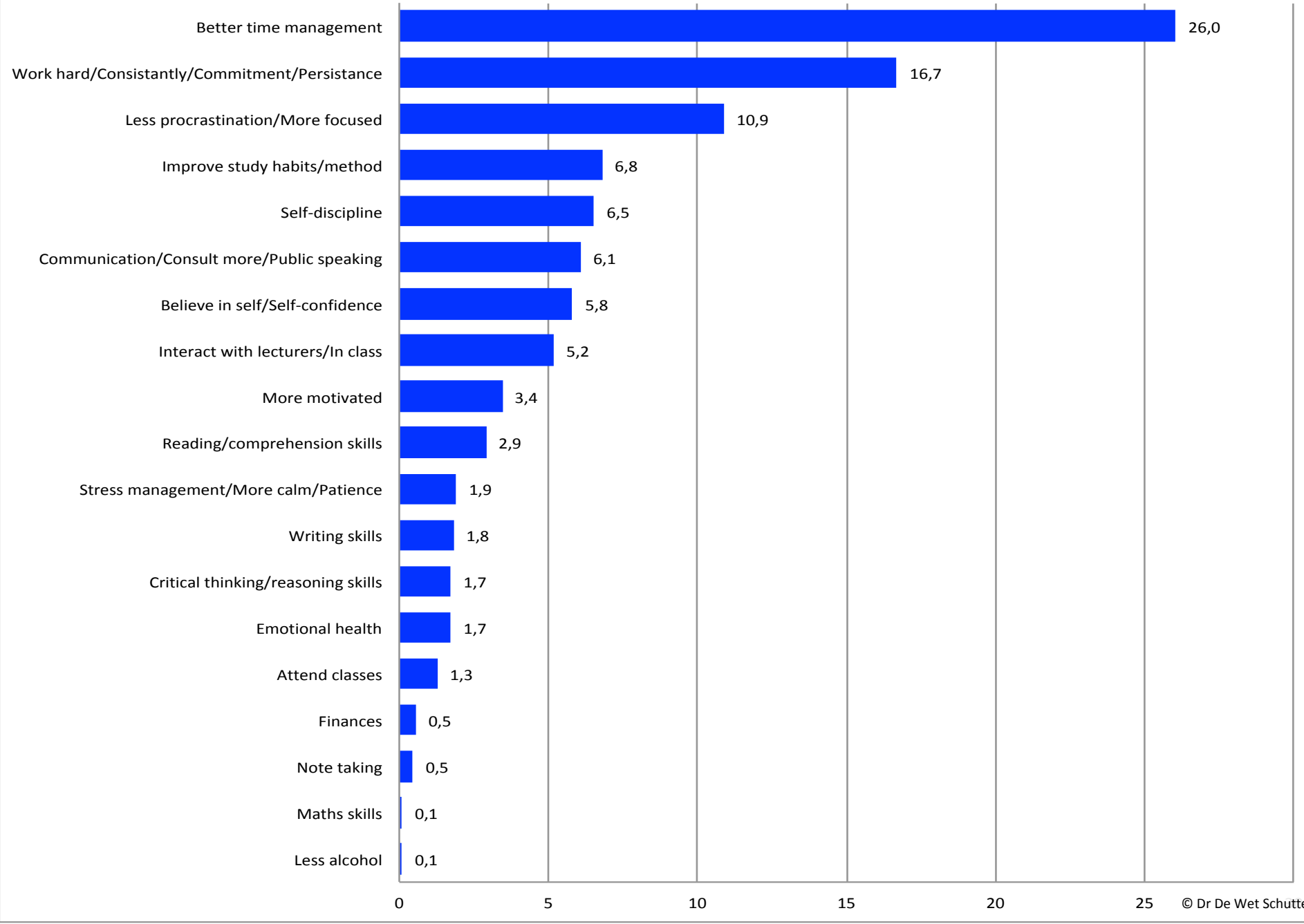
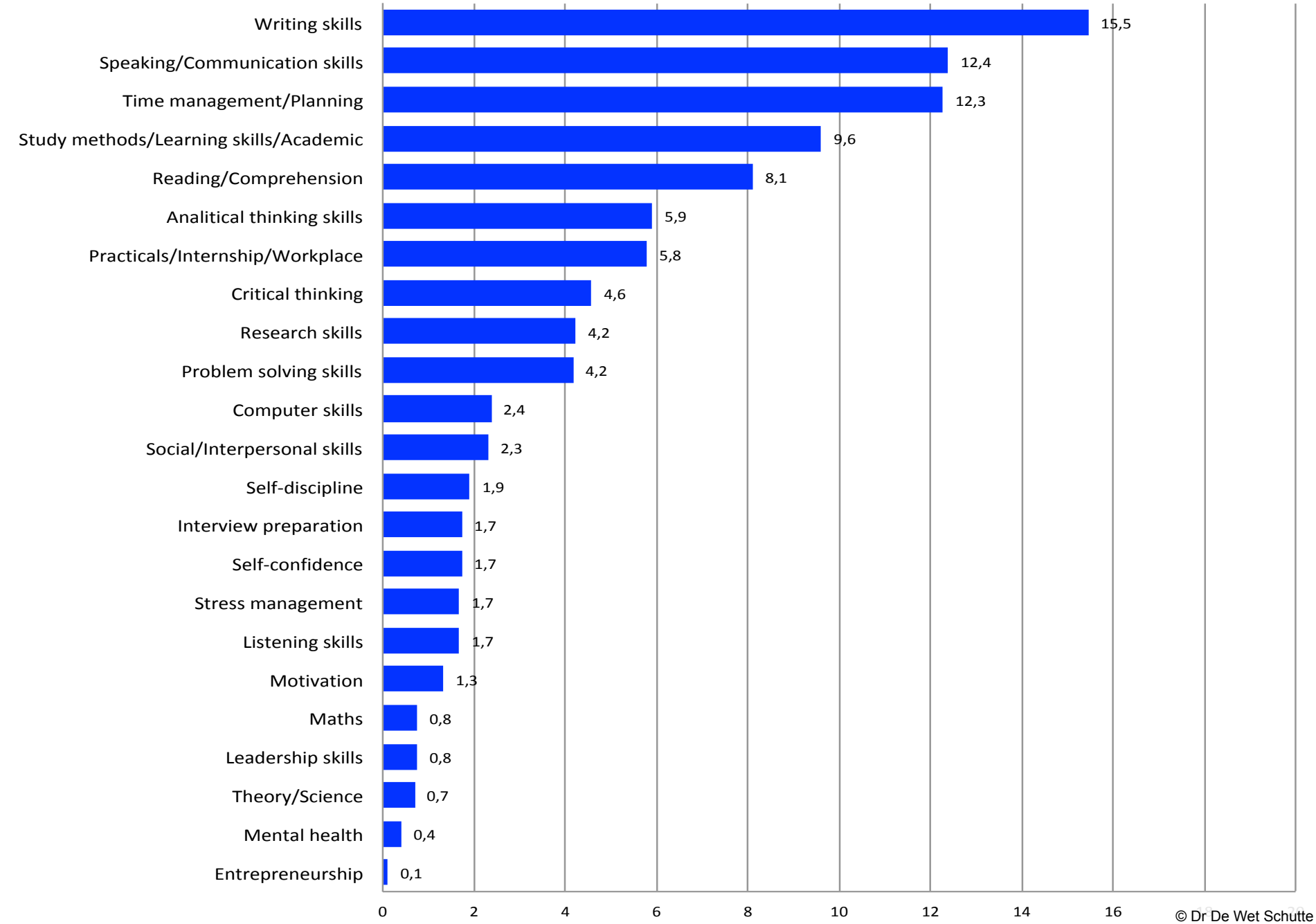
Qualities/changes you are aware of that you personally should work on



Academic skills your faculty should train their students in



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WHAT LEVEL OF INTERVENTION SHOULD OUR LEARNER ANALYTIC DATA FOCUS ON?

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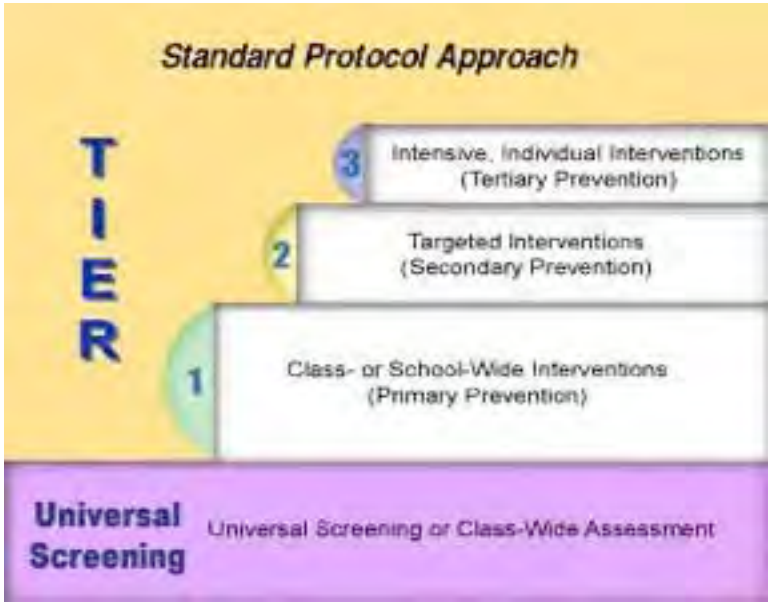
The standard protocol approach refers to support based upon the following three levels/tiers of **response to intervention** (RTI):

1. The whole class/group (**Primary intervention**).
2. Small group interventions (**Secondary intervention**).
3. Intensive individual interventions (**Tertiary intervention**).



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ACADEMICS

BEHAVIOUR

INTENSIVE INTERVENTIONS

- Individual students
- Diagnostic assessments
- High intensity

INTENSIVE INDIVIDUAL INTERVENTIONS

- Individual students
- Assessment-based
- Intense durable procedures

Tier 3
5%

TARGETED INTERVENTIONS

- Some students (at risk)
- Rapid response
- Frequent progress monitoring

TARGETED GROUP INTERVENTIONS

- Some students (at risk)
- Rapid response
- Frequent progress monitoring

Tier 2
15%

RESEARCH-BASED CORE INSTRUCTIONS

- All students
- Prevention
- Early intervention

UNIVERSAL INTERVENTIONS

- All settings, all students
- Preventative, proactive
- Classroom management

Tier 1
80%

ALL 3 TIERS FOCUS ON ACADEMIC AND BEHAVIOURAL STRATEGIES IN THE GENERAL EDUCATION SETTING

https://www.learningsuccessblog.com/blog/neuroscience-learning/rti-may-fall-short-flagging-certain-students

GENERAL ACADEMIC ALERT PICTURE

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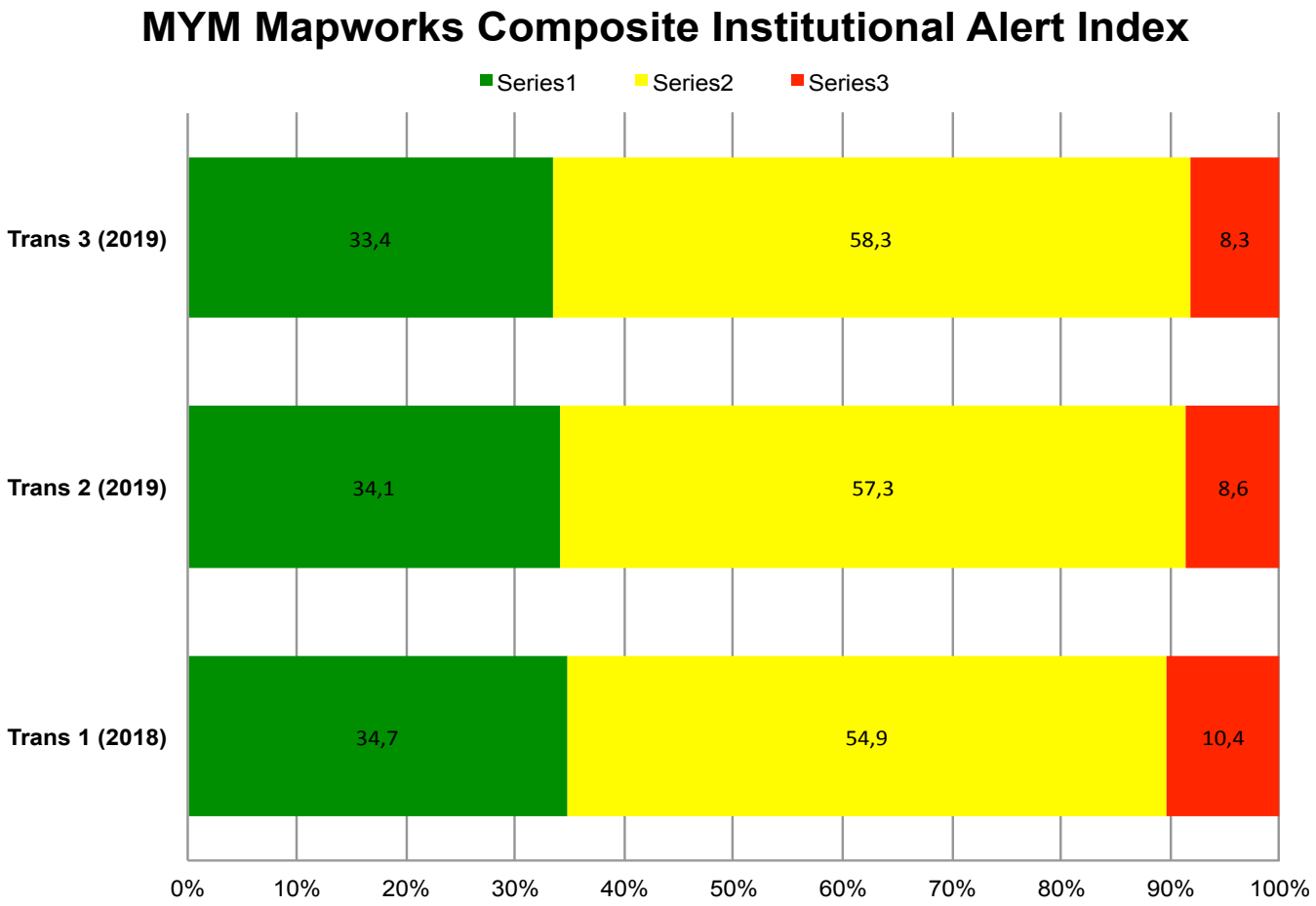
For participating students to respond to the academic demands during 2019, it was:

- **no problem** (green) for about three out of every ten students.
- **some problem** (yellow) for about six out of every ten students.
- **a problem** (red) for about one out of every ten students.



Data extracted from MYM Mapworks surveys

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OUR CHALLENGE IN UNLOCKING LEARNER ANALYTIC DATA

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We need **information** (**interpreted data**) that:

1. Is **complemented by qualitative data** that reflects the **student voice**.
2. Could assist institutional decisions to improve the academic performance of a critical mass of the student corps **across the academic performance spectrum**.
3. Can assist the **under achieving student** to become a **better student**, but also the **good student** to become an **excellent student**.
4. Can inform both the (i) **faculty** and the (ii) **institution** as a whole on the (iii) **current status** and (iv) "**movement**" (trends) of the **student experience**.

LET US ALL USE THIS COLLEGIAL OPPORTUNITY TO SHARE OUR KNOWLEDGE TO RAISE THE BAS OF OUR SCIENTIFIC CONDUCT

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THANK YOU FOR YOUR ATTENTION

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