Article

Objectual Understanding as the Primary Epistemic Aim of Education

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Abstract: A fundamental issue conceived out of the development of epistemology of education has to do with what epistemic state/s education ought to aim for. We offer a solution to this problem, one that deviates from *truth*, *critical thinking*, and *intellectual virtues* which have already been positioned as compelling solutions on their own. Instead, we argue that it is *objectual understanding*, from the framework of Jonathan Kvanvig, that best suits the place of primacy in epistemic educational aims. The paper's structure finds order and consistency with how the problem is treated as mentioned above. Section 1 introduces the different types of understanding in epistemology. In section 2, the epistemic value of objectual understanding is established, along with a defense of this epistemic state from the problems encountered for other positions. The second section also includes a discussion of the compatibility of objectual understanding with other epistemic aims of education. In section 3, we proceed to examine the influence of having addressed the epistemic aims debate to the educational concepts of curriculum, teaching, and learning.

Keywords: Kvanvig, epistemic aims, epistemology of education, objectual understanding

D oes philosophy have anything to say about education? Answering in the affirmative might not seem to be a controversial claim in more recent times. However, prior to the introduction of analytic philosophy of education in the late 1950s, educational theory was not always as welcoming to philosophical pronouncements as it is in the 21st century—and not without good reason. According to Colin Evers,

> it was fashionable among philosophers of education to attempt to *deduce* educational claims from philosophical premises. As the 1942 and 1955 *National Society for the Study of Education* yearbooks indicate, philosophy of education was something of a smorgasbord, with characteristic educational positions being associated with particular philosophical 'isms', such as empiricism, existentialism, rationalism, pragmatism, and so on .... [1]

Given this tendency for philosophy to be reductive of its pronouncements about education, a crucial message can be learned from it—particularly, that addressing educational issues from a philosophical standpoint demands careful and scholarly scrutiny. This criticism can also be taken to mean that a mere contextualization of educational issues within a philosophical *-ism*, so to speak, is not enough to render one's position as a philosophy of education. Provided that the methods being used to treat educational issues are aligned with philosophical methods and are stated as such, a healthy exchange of ideas can be achieved in the realm of academic research.

Having laid down these considerations, it should be mentioned that this paper is aligned with the analytic tradition in epistemology as a way to resolve the issue of which epistemic aim ought to be primarily cultivated by education. The problem is first and foremost a *normative* problem as it deals with an analysis of epistemic value derivable from a given set of epistemic goods. Second, it is an *epistemological* problem as it follows from, and further contributes to, literature centered around epistemological ideas (i.e., discourse on the nature of epistemic states, intellectual virtues, etc.). Third, it is a problem that, once addressed, will inevitably influence the philosophical treatment of certain educational concepts.

Our principal intention is to argue that Jonathan Kvanvig's *objectual understanding* ought to be the primary epistemic aim of education.[2] The paper's structure finds order and consistency with how the problem is treated as mentioned above. Section 1 introduces the different types of understanding in epistemology. In section 2, the epistemic value of objectual understanding is established, along with a defense of this epistemic state

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[1] Colin W. Evers, "Analytical and Post-Analytic Philosophy of Education: Methodological Reflections," in *Philosophy of Education: Major Themes in the Analytic Tradition, Volume 1*, ed. by Paul Hirst and Patricia White (London and New York: Routledge, 1998), 120.

[2] See Jonathan Kvanvig, *The Value of Knowledge and the Pursuit of Understanding* (Cambridge: Cambridge University Press, 2003).

from the problems encountered for other positions. The second section also includes a discussion of the compatibility of objectual understanding with other epistemic aims of education. In section 3, we proceed to examine the influence of having addressed the epistemic aims debate to the educational concepts of curriculum, teaching, and learning.

1 Types of Understanding in Epistemology

Just as there are varieties of knowledge, understanding comes in different varieties as well. These are, according to Kvanvig, mainly drawn from the distinctive use of the term "understanding" in various grammatical and logical forms.[3] Granted that its types are varied by virtue of their use, this entails that the *nature* of each type will also result in varied alterations. To begin with, consider the cases below—each of which represents one variation of understanding:

(1) I understand that the Earth is not the center of the solar system.
(2) I understand why the Earth is not the center of the solar system.
(3) I understand the Copernican revolution.

Case (1) is of the form "I understand that *p.*" It is very similar to propositional knowledge which takes place whenever the words "I know that" are followed by a proposition. Here, the utterance of "I understand that" is followed by a proposition, thus resulting in the name *propositional understanding*, where the epistemic agent understands that *p* is the case. Case (2) is of the form "I understand why *p*," where *p* is a proposition that happens to have some cause for explanation. Not only does the epistemic agent commit to a belief in *p*, but he/she also claims to have an understanding of the explanation, cause, or reason for *p*, perhaps, in another proposition *q*. This is often simply called *understanding-why*, but in some instances, it is also rendered the name *explanatory understanding* by virtue of its inclusion of explanation for the reason or cause that allowed the given proposition to obtain. Finally, Case (3) exhibits the form "I understand X," where X is the *object* of understanding; hence, the name, *objectual understanding*. It is this latter variation of understanding that this paper endorses due to its epistemic value, which is elaborated in subsection 2.1.

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[3] *Ibid.*, 188.

2 The Primary Epistemic Aim of Education

The problem at hand involves a comparative analysis of the epistemic goods education ought to attain. Certainly, there are educational aims that come from a non-epistemic nature, i.e., economic, moral, personal, etc.[4] A learner may want to enter formal education for many reasons, such as long-term financial security, qualification for a graduate or postgraduate degree, or even for the sole purpose of learning. Analysis of these goals adheres to individual preferences and epistemology may not necessarily be the correct framework to address them. There are, however, intrinsic values promoted in education that are categorized as epistemic ends.

Harvey Siegel addresses these by promoting the idea that education should strive to cultivate *critical thinking* in its ultimate epistemic pursuits.[5] Alvin Goldman promotes a different view, one that is more strictly oriented towards the achievement of truth.[6] By contrast, Jason Baehr adopts significant themes in virtue epistemology and promotes the cultivation of intellectual virtues as the fundamental goal of education.[7] Finally, we utilize Kvanvig's conception of *objectual understanding* to address the problem of primary epistemic goals.[8] Promoting this claim requires an examination of the inherent value contained in the epistemic state, which is why subsection 2.1 explores the *final* or *inherent value* of objectual understanding. Second, a defense of this proposal will have to address the issues that the three other positions have encountered and subsection 2.2 rightfully serves this purpose. Finally, subsection 2.3 addresses the relationship between understanding and other epistemic aims and explores the *instrumental* and *constitutive* value that the other epistemic aims hold.

2.1 Understanding as Epistemically Valuable

Integral to defending objectual understanding is putting emphasis on its epistemic value. As a normative inquiry, *value* is a key area of investigation for epistemic aims. Contrary to descriptive statements which are merely

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[4] See John White, *The Aims of Education Restated* (London: Routledge, 1982).

[5] See Harvey Siegel, "Truth, Thinking, Testimony and Trust: Alvin Goldman on Epistemology and Education," in *Philosophy and Phenomenological Research*, 71:2 (2005).

[6] See Alvin Goldman, *Knowledge in a Social World* (Oxford: Clarendon Press, 1999).

[7] See Jason Baehr, "Educating for Intellectual Virtues: From Theory to Practice," in *Education and the Growth of Knowledge: Perspectives from Social and Virtue Epistemology*, ed. by Ben Kotzee (United Kingdom: Wiley Blackwell, 2013).

[8] See Kvanvig, *Value of Knowledge*.

concerned with *matters of fact*, normative statements are concerned with *matters of value*.[9] And appealing to a notion of intrinsic value, that is to say, "value a thing has in itself and thus independently of its consequences,"[10] makes for a promising starting point. While there is intrinsic or final value, there is also instrumental value which works so that having value "is to contribute—in a factually analysable way—to something further which is (say) deemed desirable."[11] In arguing for what one *ought to* attain and cultivate, therefore, the prospective end goal will be indicative of the sorts of things one takes to be of *value*.

In the case of objectual understanding, epistemic value is evident in at least three distinct ways and a glimpse into the discussions that surround the value of knowledge gives us a better idea at how the final value of understanding is to be defended. In the conventional *justified true belief* account of knowledge,[12] there are at least two ways in which value is undermined: (1) the value of the epistemic good in question can be attributed to its constituents, therefore value is *constitutive* rather than *final*, and (2) value is undermined by Gettier cases. The argument for (1) suggests that an epistemic good whose value relies on the value of its constituents cannot be rendered *finally valuable*. An epistemic good is *finally valuable* only when its value is independent of the value of its constituents.

In the general sense, the value of objectual understanding lies in its capacity to systematize and organize one's thinking about a subject matter.[13] Having objectual understanding indicates that one does not merely hold a cluster of unconnected information about a subject matter. Rather, one tends to have mastery of the coherent system embedded within the object in question. So, when a learner understands the basic principles of arithmetic, there is more to her understanding than a mere cluster of arithmetic rules in propositional form. In other words, rather than being reduced to the sum total value of its constituents, an emergent value can be attributed to objectual understanding. One cannot simply pick apart the value of each individual belief that makes up one's objectual understanding and say that the value lies in each of those beliefs. As previously mentioned, intrinsic value is formed in

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[9] See Robert Audi, "Fact/Value," in *A Companion to Epistemology: Second Edition*, ed. by Jonathan Dancy, Ernest Sosa, and Matthias Steup (United Kingdom: Wiley-Blackwell, 2010), 369.

[10] *Ibid.*

[11] *Ibid.*

[12] See Roderick Chisholm, *Theory of Knowledge* (London: Prentice-Hall, 1996).

[13] See Kvanvig, *Value of Knowledge*, 205.

the holistic attainment of understanding, thereby allowing systematization and organization of thinking to take place.

Kvanvig also addresses how objectual understanding can work around issue (2)—specifically the undermining of value under Gettier cases. He maintains that while most accounts of propositional knowledge are susceptible to weakening through sort form of luck, objectual understanding does not seem to espouse the same problem. Scholars after Kvanvig have labeled his view as *full compatibilist* because he views objectual understanding to be immune to all cases of epistemic luck.[14] Even if it turns out that the facts leading to one's understanding have been Gettierized and only luckily that the relationships and factive information were correctly gathered by the epistemic agent, the grasped relationships and central pieces of information remain intact and uncompromised.

There is also a third kind of value that can be ascribed to cases of objectual understanding. This is what Kvanvig calls *response-dependent* special value of understanding.[15] In his view, objectual understanding finds its special value in the fact that it satiates an epistemic agent's curiosity. Specifically, he states that what sates curiosity is "not a matter of coming to know or justifiably believe some individual proposition, but rather having figured out or learned some body of information about the target of curiosity, whether the target was propositional or objectual."[16] Altogether, these three features of understanding expose its intrinsic value among other epistemic goods.

2.2 Responses to the Problems for Goldman, Siegel, and Baehr

After the discussion of epistemic value, the study can now proceed to the responses to the problems raised for Goldman's, Siegel's, and Baehr's positions. What were the issues in the veritistic view? What about Siegel's view of critical thinking and Baehr's intellectual virtues? Is Kvanvig's conception of understanding able to address these issues? Subsection 2.2.1 returns to the objections against veritism including the indirect access to truth, and the inapplicability to certain fully intellectual subjects. Subsection

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[14] See Fernando Broncano-Berrocal and J. Adam Carter, "Epistemic Luck," in *Routledge Encyclopedia of Philosophy*, ed. by Tim Crane (London: Routledge, 2017).

[15] See Jonathan Kvanvig, "Curiosity and the Response-Dependent Special Value of Understanding," in *Knowledge, Virtue, and Action: Essays on Putting Epistemic Virtue to Work*, ed. by Tim Henning and David P. Schweikard (Routledge: New York and London, 2013).

[16] *Ibid.*, 169.

2.2.2 is an exposition of objections to Siegel's position, which includes the instrumentality claim for critical thinking. Subsection 2.2.3 returns to the difficulties of assessment in Baehr's intellectual virtues and raises the problematic nature of pluralism. The discussions principally involve counterclaims in defense of Kvanvig's objectual understanding.

2.2.1 Quasi-factivity and Coherence contra Veritism

Goldman advocates for a monistic veritistic view. In his account, he posits that the main epistemic goal of education is the acquisition of true belief.[17] He also recognizes that critical thinking can be useful for truth acquisition, but that it only pushes the epistemic value of critical thinking towards instrumentality. The finally valuable aim, he maintains, ought to be truth. But there are two critical issues for this veritistic view.

First, there is the inability of epistemic agents to directly access truth. This was previously raised by Siegel, stating that "We don't in general have 'direct access' to truth; if we want our beliefs to be true, we typically have no option but to reason evidentially."[18] This is unlike critical thinking which can, in principle, be directly accessed by the individual epistemic agent. It is conceivable to evaluate critical thinking without evaluating the degree to which the cognitive state relates to facts or states of affairs. But the same cannot be said of the veritistic view. If true belief is the end goal, it may be difficult to develop evaluative tools that measure just how much a learner has acquired true beliefs.

Additionally, this allows for unfavorable consequences where even the educator may be imparting false beliefs by virtue of not having discovered the truth, given a particular socio-historical context. It is very easy for educators to be imparting, say, a scientifically recognized truth at one point in time only for it to be falsified centuries later. The problem here is not that neither the educator nor the learner eventually held *false beliefs*. Certainly, one could say that such falsity does not undermine the quality of education. The problem is that with a monistic veritistic view, it would seem as though there was no substantial education that took place, just because they were left holding false beliefs. If intuition says that such falsification does not warrant the undermining of the education that occurred, then that is a problem for veritism.

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[17] See Alvin Goldman, *Knowledge in a Social World*.
[18] Siegel, "Truth, Thinking, Testimony, and Trust," 351.

In the case of objectual understanding, the issue of having no direct access to truth becomes apparent in its treatment of what is known as *quasi-factivity*. According to Kvanvig, "on the quasi-factive view, the pieces of information that are central to the understanding in question must be true."[19] Once the factivity in those central pieces of information is secured, the existence of falsehoods in the periphery is warranted.

A crucial thing to note here is the manner through which Kvanvig's objectual understanding deviates from Goldman's knowledge in the weak sense (which is *true belief*). Kvanvig stresses that in order for objectual understanding to take place, the epistemic agent must have been able to grasp the relationship between the pieces of information available at their disposal. This entails that *coherence* is necessary in the attainment of understanding. Not having a direct access to truth, in the proposed model, certainly affects objectual understanding, but given its necessity for coherence, understanding is less likely to be undermined by falsification. The learner, in this model, is expected to obtain a mastery of the relationships that comprise the body of information in question.

A second objection exposes the extent to which the veritistic model can be applied. While there are practical subjects that require more than intellectual training, there are fully intellectual subjects that nevertheless require outcomes that go beyond truth. The goals of logic education, for instance, are, fully intellectual, whereas the goals of physical education are in part intellectual, and in part physical. It should follow that a truth-oriented logic education should be aspired for in the veritistic model and that its fully intellectual nature should not get in the way of its acquisition. However, this can become a challenge for the correspondence view of truth that Goldman's position is imposing.

A strong case can be made for logic education to be aimed at a mastery of the system's *coherence* rather than its *correspondence* to facts, especially given the nature of how systems in logic work. One could argue that there are standard rules for certain logical systems (that can be translated into propositional information) and that knowledge of these rules can be acquired as true beliefs. But the aim of logic education is arguably a mastery of the relationships at play among its varying elements. A mastery of such relationships involve the kind of mastery at work in acquiring objectual understanding.

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[19] Jonathan Kvanvig, "Responses to Critics," in *Epistemic Value*, ed. by Adrian Haddock, Alan Millar, and Duncan Pritchard (Oxford: Oxford University Press, 2009), 341.

2.2.2 Against Instrumentality

Siegel's view of epistemic aims initially started as a monistic, rationality-driven position. But upon Goldman's veritistic proposal, he adjusted his position to be pluralistic so that it accommodates truth as an educational aim that is equally fundamental as rationality/critical thinking.[20] In fact, he was the first to propose that a pluralistic view of aims can be made—one that accommodates more than one epistemic aim, but nevertheless rendering both aims to be of equal footing. Siegel defends his view by objecting to Goldman's claim that critical thinking is only instrumental to the goal of truth. As a reply, he raises a situation where two epistemic agents arrive at the same *true belief*, but with one having arrived at it through rational means, and one having arrived at it by luck. Intuitively, the epistemic agent whose belief is not only true but also rationally held is more epistemically commended compared to the epistemic agent whose belief is only accidentally or luckily true.

He reasons that this objection suffices to lift the *instrumentality* claim from critical thinking and establish it as being *finally* valuable and therefore ought to be attained, as well. But as Marabini and Moretti point out, this does not suffice to absolve critical thinking of its alleged *instrumental* status.[21] Rather, it further reinforces that the pursuit of critical thinking is only incentivized when exercising it results in the acquisition of true belief. The same accusation does not hold for Kvanvig's understanding. It was previously established that the value of understanding is neither *instrumental* nor *constitutive*, but *final* or *intrinsic*. It is not achieved for the purpose of arriving at truth or any other epistemic good, for that matter.

2.2.3 Issues of Assessment and Contradiction

In the case of Baehr's position, problems come in terms of the difficulty in its application. His view is an endorsement of intellectual virtues as the primary epistemic aims of education, particularly, the virtues of *curiosity*, *inquisitiveness*, *attentiveness*, *reflectiveness*, *determination*, *perseverance*, and *courage*.[22] He argues that the cultivation of these virtues are necessary for

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[20] See Siegel uses these terms interchangeably. See Siegel, "Truth, Thinking, Testimony, and Trust."

[21] See Alessia Marabini and Luca Moretti, "Goldman and Siegel on the Epistemic Aims of Education," in *Journal of Philosophy of Education,* 54:3 (2020).

[22] See Baehr, "Educating for Intellectual Virtues," 2–3.

the attainment of lifelong learning, which is what education ultimately ought to aim for.

There are at least two problems that arise from this. The first problem has something to do with the difficulty in assessing moral character. As Ben Kotzee pointed out, doubts are casted upon the ease of applying such a model in terms of coming up with standardized tests that may appropriately serve to assess intellectual virtue.[23] Certainly, there are a lot of conceivable ways to go about it. For instance, one could argue that the practice of standardized tests should also be subject to change. However, drastic measures will have to be made in order to reappropriate the educational system and its priorities towards the attainment of intellectual virtues. By no means does this entail that intellectual virtues are unworthy of cultivating. It is the proposed *primacy* in aims that is being called into question. Once the status of primacy/fundamentality to the epistemic aim is ascribed, achieving such aim becomes the ultimate priority for education. And when a learner fails to attain such a fundamental epistemic aim, education is rendered unsuccessful.

Is the same difficulty of assessment applicable to objectual understanding? We argue on the negative. Baehr's intellectual virtues come across with this problem primarily because of the nature of intellectual virtue. Patterned after an Aristotelian notion of virtue, intellectual character virtues are exercised habitually, and they vary depending on the epistemic agent's psychological constitution and character. In other words, the embodiment of virtues are person-specific and therefore unfeasible to standardize. Add to that an even more difficult challenge of coming up with psychometric assessment tools. The key thing to note here is that the nature of objectual understanding is not the same as that of intellectual character virtues.

Objectual understanding, however, is not a character trait to be cultivated over time through habitual practice. Rather, it is acquired after gathering the necessary information about a subject matter. It certainly helps to at least have these virtues so that the acquisition of understanding becomes easier, but they are nevertheless different when it comes to cultivation and assessment. The objections presented above are specifically targeted towards the assessment of character rather than the acquisition of epistemic states.

Finally, there is the issue of pluralism present for both Siegel's and Baehr's views. A pluralistic view is susceptible to difficulties in application

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[23] See Ben Kotzee, "Problems of Assessment in Educating for Intellectual Virtue," in *Intellectual Virtues and Education: Essays in Applied Virtue Epistemology*, ed. by Jason Baehr (Routledge, 2015), 144.

because of the tendency for the fundamental aims to come into contradictory situations. When such situations are at play, one would have to favor one aim over the other, and this defeats the purpose of having *equally fundamental* aims. Critical thinking and truth, for one, are not always compatible with each other, and perhaps, the same can be said of the multiple intellectual virtues presented by Baehr. The problem is very easily addressed here by simply stressing that the proposed position is *monistic* rather than *pluralistic*. We propose that *objectual understanding* is the primary epistemic aim, where other epistemic aims come secondarily to it. Therefore, no issues of contradiction and priority are encountered in the process.

2.3 Understanding and Secondary Epistemic Aims

After addressing the objections to other views, this appears to be the perfect transition to discuss the compatibility of objectual understanding with other aims. Granted that understanding is promoted as the *primary* epistemic aim, could there be *secondary* epistemic aims? There is no need to look any further. A reasonable place to find such aims is within the other positions themselves. How does *truth, critical thinking*, and *intellectual virtues* play out with the pursuit of understanding?

The quasi-factive nature of understanding, first and foremost, establishes truth to be a partial constituent for objectual understanding. Truth is *constitutively valuable* to the attainment of objectual understanding. What about the relationship of objectual understanding with intellectual virtues and critical thinking? In an earlier work, Kvanvig expresses an inclination to defending virtue epistemology.[24] It appears that this inclination is also evident in his discussions concerning the value problem. He writes that:

> virtue epistemology has an important contribution to make to the discussion of the value of knowledge, for we have seen how credit is due for virtuous belief and how the value of such credit is not swamped by the value of true belief itself.[25]

At best, Kvanvig does not take away the epistemic value attributed to beliefs that were formed out of virtue. It should, nevertheless, be noted that

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[24] See Jonathan Kvanvig, *The Intellectual Virtues and the Life of the Mind: On the Place of the Virtues in Epistemology* (London: Rowman & Littlefield Pub Inc, 1992).

[25] Kvanvig, *Value of Knowledge*, 106.

virtuously formed beliefs are not guaranteed to be error-proof. Having them certainly strengthens the core beliefs of the epistemic agent and, as a result, furthers the intricacy of the pieces of information tied together in any instance of objectual understanding. But the caveat is that there is no guarantee that virtuously held beliefs will always arrive at useful epistemic goods. The most that virtue provides is a capacity to heighten the epistemic value to one's objectual understanding.

While there is a potential avenue for intellectual virtues to be rendered education's secondary epistemic aims with its provision for supplementary epistemic value, it might be worth noting that Kvanvig understands intellectual virtues to be "cognitive powers or abilities, such as accurate perception, reliable memory, and sound reasoning."[26] This is different from Baehr's notion of intellectual virtue which is more specifically aligned with interpreting intellectual virtues as "character traits more analogous to the moral virtues, such as intellectual courage, intellectual honest, and fair-mindedness."[27] Rather than character traits, therefore, objectual understanding can connect with intellectual virtues when it is placed at the receiving end of cognitive abilities.

This conclusion leads to another possibility for epistemic aims. Rather than the intellectual virtues proposed by Baehr, it is the critical thinking of Siegel that more closely adheres to the kind of virtue that Kvanvig's understanding is compatible with. Siegel argues for critical thinking as an ability that results in rationally held beliefs. Upon redirecting this end result into objectual understanding, its instrumental value makes it a suitable candidate for secondary epistemic aims. This is in conjunction with truth and the purpose it serves for the quasi-factive aspect of objectual understanding.

3 Intersections of Epistemic Goods and Education

What can be gathered from the preceding discussions is that education is directed at the attainment of objectual understanding, and that truth, critical thinking, and certain kinds of virtues make the drive towards getting there much faster. One's reasons for opting to arrive at it are drawn from the intrinsic value it is equipped with. Finally, the study is in a position

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[26] John Greco, "Virtue Epistemology," in *A Companion to Epistemology: Second Edition*, ed. by Jonathan Dancy, Ernest Sosa, and Matthias Steup (United Kingdom: Wiley-Blackwell, 2010), 75.

[27] *Ibid.*

to address its second major philosophical question. How does resolving the primary epistemic aim influence other areas in epistemology education?

The following subsections explore the implications of epistemic aims for curriculum theory, teaching, and learning—all of which are mapped onto existing epistemic discussions of the said concepts. In subsection 3.1, we demonstrate the place of the primary epistemic aim in issues surrounding curriculum theory, emphasizing the need for a unifying framework in curriculum design and development. In subsection 3.2, we highlight the role of teaching with the objective of understanding in mind. Lastly, subsection 3.3 pins the connection that resonates between learning and understanding.

3.1 Epistemic Aims and Curriculum Theory

Although epistemology of education is only starting to grow as a discipline, philosophy of education has been around for quite some time now, in the likes of Plato, the Stoics, Jean-Jacques Rousseau, John Dewey, and, eventually, contemporary philosophers of education.[28] Philosophical approaches to educational concepts like teaching, learning, and the curriculum have already been the subject of conversation in academic research, prior to its migration to epistemology. Thus, when epistemic issues were becoming a focal theme in the matter, the traditionally conceived philosophical treatment of educational concepts started intersecting with epistemic concepts. Curriculum theory was not spared from these conceptual intersections.

One of the prominent issues discussed in relation to curriculum pertains to the skills/content debate, particularly, "whether the school curriculum should be structured around the transmission of educational content or should focus on inculcating skills."[29] On the onset, this seemingly purports a kind of *knowledge-how* versus *knowledge-that* debate, if one were to bank on the assumption that education's ultimate goal is knowledge. But there is more to it than that. Carter and Kotzee further posits that there are at least two levels of interpreting the problem: (1) on the macro-level, the problem demands an answer to whether "the curriculum as a whole should be weighted towards theoretical subjects such as history, mathematics, science and literature (content) or vocational subjects such as cookery,

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[28] See Randall Curren, "Introduction," in *A Companion to the Philosophy of Education*, ed. by Randall Curren (London: Blackwell Publishing, 2003).

[29] J. Adam Carter and Ben Kotzee, "Epistemology of Education," in *Oxford Bibliographies Online* (forthcoming), 19.

carpentry, engineering or accounting (skills)," and (2) on the micro-level, the problem demands an answer to whether *disciplinary content* favors *disciplinary skills* or vice versa *within* the disciplines themselves.[30]

It should be noted that the framing of the problem as an opposition that supposedly resonates between theoretical and vocational subjects is questionable on its own. When operating from a purely epistemological standpoint, it will be inevitable for discussions to cover mainly the contents of propositional attitudes. But this does not entail that epistemology automatically advocates for theoretical subjects to be favored in the macro-level of curriculum creation. It would be quite similar to pitting the epistemic aims against the non-epistemic aims of education. They work in conjunction with, and not against, each other. Thus, it is far more reasonable to dismiss problem (1) than it is to accept it and favor one of the two presupposed options. In so doing, we challenge the presupposition that theoretical *contra* vocational subjects should dominate the macro-level facet of the curriculum, or vice versa. The same can be said of problem (2), except that, in this instance, the content-skill opposition is dropped to the level of the subject area/discipline.

One thing that the study can obtain from these discussions, though, is a peek at how the topic of epistemic aims fits into the conversation. With respect to the issue of *content*, the epistemic aims debate asks precisely *in what form* such content ought to be reached. Does content mean the object of knowledge or the object of understanding? Given this study's theoretical preference, evidently the study adheres to the latter.

The connection that underlies holding a firm stance over educational aims and its subsequent influence on curriculum development and design is by no means accidental. Initially, one could refer to the contributions of Ralph W. Tyler who postulated that, in curriculum development, the first question to be asked is what *educational purposes* the school should seek to attain.[31] In other words, he points to the need to identify a set of principal objectives before proceeding to the more practicable aspects of curriculum development, i.e., how educational experiences can be effectively organized and how one can determine whether such purposes are attained in education. Similarly, Robin Barrow and Ronald Woods put emphasis on the necessity of having a pre-determined educational aim in mind when developing and

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[30] *Ibid.*

[31] See Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: University of Chicago Press, 1949).

designing a curriculum.[32] Arguing from the negative, they postulate that a lack of a defined educational aim is detrimental to this process. They further argue that although determining such an aim is a task for philosophy, much of it is disregarded as a worthy task to undertake, stating that:

> The ends are variously presumed to be given, unproblematic, the product of democratic consensus, self-evident, or, paradoxically, too complex for anyone but absent-minded philosophers to worry about. What they are not is firmly grasped, stated and connected to research, argument and prescription pertaining to means.[33]

Holding this view, they argue, can be detrimental as it results to the curriculum where there is an implicit "set of very dubious and ill-thought-out objectives or end states. Notions such as intelligence, imagination, understanding—specifically human attributes—are either ignored or travestied by operational definitions."[34] It is for these reasons that reaching a thoughtful conclusion for epistemic aims of education, at least, at the level of philosophical research becomes a valuable task. In the case of the study at hand, *objectual understanding* of the foundational principles in any given subject/discipline in question is being promoted as the ultimate goal. Identifying the form in which intellectual ends are projected to play out is a step closer towards the development of an epistemic framework for curriculum theory.

3.2 Teaching Epistemic Goods

In a paper, titled "Teaching and Training," Gilbert Ryle sets up an insightful thought experiment that accounts for the nature of teaching.[35] He asks, "how, in logic, can anyone be taught to do untaught things?"[36] In asking this, he brings out two seemingly different cases of learners: Case 1 involves the self-taught man who did not receive any formal education but who taught

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[32] Robin Barrow and Ronald Woods, *An Introduction to Philosophy of Education* 4th ed. (London & New York: Routledge, 2006), 65.

[33] *Ibid.*, 67.

[34] *Ibid.*

[35] See Gilbert Ryle, "Teaching and Training," in *The Concept of Education*, ed. by R.S. Peters (Taylor & Francis e-Library, 2010), 73.

[36] *Ibid.*

himself through textbooks, encyclopedia articles, etc., and was successful in doing so. One could say that he had an untrained teacher, but then again, it was himself who embodied the role. Case 2, on the other hand, involves that of the average boy. He is described by Ryle to be quite ordinary, not necessarily brilliant, but not really unintelligent either. Now, consider the following scenario of the boy in Case 2:

> He has learned to spell and read monosyllables like 'bat', 'bad', 'at', 'ring', 'sing' etc., and some two-syllable words like 'running', 'dagger' and a few others. We have never taught him, say the word 'batting'. Yet we find him quite soon reading and spelling unhesitantly the word 'batting'. We ask him who taught him this word and, if he remembers, he says that he had found it out for himself.[37]

Ryle invites us to examine how it was even possible for the boy in Case 2 to have learned the word "batting" when it was not originally part of the propositional information taught to him. Once again, his initial inquiry demands an answer: how, in logic, can anyone be taught to do untaught things?

Noticeably, the above exhibits a complex question as it presupposes a claim that happens to be unfounded. Ryle says that the premise of this question is wrong, to begin with. One cannot be taught to do untaught things. The learner eventually wills himself to reason from the base ideas imparted to him in the process of education. It is unfeasible for the learner to be *forced* by the educator into creating new products of thinking. So, while it is reasonable to give the educator credit for laying down the basic epistemic ingredients to the learner, the educator does not get full credit for the eventual cognitive success and creation of new products of thinking by the learner. The learner cannot be forced into creating beyond what was taught to him. It has to come from his own will.

If it is impossible to *coerce* independent thinking, what, then, is the function of teaching? In Ryle's view,

> A familiar and indispensable part or sort of teaching consists in teaching by rote lists of truths or facts, for example the proposition that 7×7 is 49, etc., the

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[37] *Ibid.*

proposition that Waterloo was fought in 1815, etc., and the proposition that Madrid is the capital of Spain, etc.[38]

This tells us a lot about teaching epistemic goods. There are basic epistemic ingredients that are handed to learners by their teacher upon entering formal education. What they do with these foundational epistemic tools will depend on their own agency. Ryle begins with Case 1 in an effort to expose the intuitive assumptions of what a self-taught man looks like, but fundamentally, the admirable learner involved in Case 2 is, by the very essence of such description, a self-taught boy himself. None of this entails that the presence of a teacher in the educational process should be eliminated. In a similar Socratic fashion, the teacher is the metaphorical midwife who provides assistance to the autonomous learner so that the latter gives birth to new ideas.

The task of the teacher is, therefore, to show the ropes, but the learner will have to will himself to operate on them. Here, it becomes important to raise the kind of epistemic goods that are to be imparted to learners. Although Ryle suggests that there are certain truths or facts that are necessarily imparted, ultimately such facts will have to be tied together in a coherent system. This way, the learner is given a coherent set of conceptual tools that will later be useful for when he/she eventually pursues further independent thinking. In so doing, the learner becomes equipped with a capacity to reason from the basic informational chunk obtained through education. The way to make this ambition possible is to aim for the students to attain understanding of the basic conceptual tools that allow them to reason further.

3.3 Understanding as Learning

Simultaneous with the teaching process is, of course, the learning process. Education is not complete without some form of learning. It should be noted, however, that the concept of *learning* is different for philosophy as it is for psychology. The theories of learning that came out in 20th-century educational theory have semblances of psychological theory. Usually, they define learning as "an enduring change either in behavior or in the capacity to behave in a given fashion, which results from practice or other forms of experience."[39] Describing learning as a kind of behavioral change naturally

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[38] *Ibid.*, 74.

[39] Dale H. Schunk, "Theories of Learning," in *Encyclopedia of Educational Theory and Philosophy*, ed. by D.C. Phillips (SAGE Publication, Inc., 2014), 466.

pushes the conversation towards the center of psychological studies. But there is an undeniable link between learning and epistemic states.

Consider the following descriptions of learning according to philosophers of education. For Christopher Winch and John Gingell, "The standard case of learning involves an individual acquiring knowledge that they did not have before."[40] Here, they speak of learning as the acquisition of new knowledge by the individual epistemic agent. For Carol and Thomas Wren, "learning consists in coming to know something."[41] Again, there is the attribution to knowledge acquisition. But adding further, they posit that the question of how one comes to know is an entirely separate philosophical enterprise. Finally, there is Michael Luntley's postulation that "Learning by reasoning is learning in which the pupil works out what to do and what to think for herself,"[42] which hints at the possibility equating learning by reasoning with independent thinking.

Evidently, when viewing *learning* from epistemic lenses, it becomes an academic battle for the kind of epistemic good that can be equated to it—i.e., whether learning is equivalent to, if not involves, knowledge acquisition, intellectual character virtue cultivation, or independent thinking cultivation. The contention of this study is that learning, as is the case with objectual understanding, comes in varying degrees. It is conceivable for a learner to have learned and continue to learn further. It is possible for there to be two learned students where one is *more learned* than the other. In other words, there is a degree at which learning is achieved. And it is this furtherance of learning that is key to finding the epistemic good in question.

The issue with equating learning with propositional knowledge is that the latter is *atomistic* in nature. It accounts for the furtherance of learning as a kind of *cumulative* activity, where the learner can be said to have furthered his/her learning through an accumulation of individual items of propositional knowledge. In other words, the continuous process of learning is equated with a mere incessant collection of propositional information over time. In such a model, a *more learned* person is a *more knowledgeable* person by virtue of him/her holding more pieces of propositional knowledge relative to another person. David Hamlyn argues against this and in defense of

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[40] Christopher Winch and John Gingell, *Philosophy & Educational Policy: A Critical Introduction* (New York: RoutledgeFalmer, 2004), 38.

[41] Carol Wren and Thomas Wren, "The Capacity to Learn," in *A Companion to the Philosophy of Education*, ed. by Randall Curren (Blackwell Publishing, 2003), 247.

[42] Michael Luntley, "Learning, Empowerment and Judgement," in *Critical Thinking and Learning*, ed. by Mark Mason (USA: Blackwell Publishing, 2008), 79.

understanding.[43] In his view "Nothing is contributed by way of understanding when people are made to recite general propositions, even if these are fundamental to a subject."[44]

Hamlyn recognizes knowledge to be involved in the learning process. But a furtherance of learning leads, in fact, to understanding. He explains that:

> Understanding, moreover, involves and presupposes the acquisition and use of concepts. One can understand nothing of a subject unless one has the concepts in which that understanding is to be expressed. Hence, the process of learning a subject goes hand in hand with the process of acquiring the relevant concepts, the concepts in terms of which the subject matter and its principles are to be formulated.[45]

We argue here that the most mature phase of learning takes the form of objectual understanding. It was previously established that the role of teaching involves laying down the basic epistemic ingredients for the learner to reason further. When objectual understanding of these conceptual tools is attained, the learner independently expands this understanding (either more broadly or more deeply) in his educational pursuits using the basic tools handed to him/her early on in formal education. As a result, this allows the continuity of education to progress even beyond the institutional mechanisms of formal education.

Conclusion

The primary aim of understanding has been extended to epistemic conversations about the educational concepts of curriculum, teaching, and learning. It was revealed that having a unifying epistemic aim is substantial to the design and development of the curriculum. The discussions also showed that teaching necessitates the foundational principles of a discipline to be objectually understood. We have consistently and strongly maintained the necessity of educating for the pursuit of objectual understanding, which is contrary to the prevalent notions of prioritizing truth, critical thinking, and

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[43] David W. Hamlyn, "The Logical and Psychological Aspects of Learning," in *The Concept of Education*, ed. by R.S. Peters (Taylor & Francis E-Library, 2010).

[44] *Ibid.*, 18.

[45] *Ibid.*

intellectual virtues. Although such ends are valuable and supportive of the ultimate goal, learning is arguably incomplete upon attainment of these secondary ends. Intuitively, one does not imagine the learner who has acquired innumerable true beliefs as the ideal result of successful education. By contrast, the acquisition of an understanding of the fundamental tools of reasoning is indicative of successful education. Ultimately, such understanding is equivalent to the most mature degree of learning.

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